DRIVING WITH INSULIN-TREATED DIABETES

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FOREWORD

This study was prepared in response to Senate Concurrent Resolution No. 174, S.D. 1 (2002). The concurrent resolution directed the Legislative Reference Bureau to conduct a study on whether the State should allow insulin-treated diabetics to acquire commercial driver's licenses for intrastate purposes.

The Bureau extends its appreciation to the many federal, state, private agencies, including the state Department of Transportation, who generously provided information and assistance in the preparation of this study.

Wendell K. Kimura
Acting Director

December 2002
FACT SHEET

I. Highlights

There is considerable evidence and arguments supporting the position that drivers with insulin-treated diabetes should be allowed to acquire commercial driver's licenses for intrastate purposes, including the:

(1) Inconclusiveness and inability of studies and reports conducted thus far to convincingly prove that all drivers with insulin-treated diabetes mellitus (ITDM) should not be allowed to acquire commercial driver's licenses;

(2) Unremarkable risk associated with ITDM drivers when compared with other categories of driving risks and the driving public-at-large;

(3) Equal employment opportunity considerations of ITDM drivers raised by the U.S. Equal Employment Opportunities Commission;

(4) Experiences of other states and federal agencies that accommodate ITDM drivers; and

(5) Recent improvements in the medical treatment and care of diabetics.

II. Anticipated Questions

Q1. What is wrong with prohibiting drivers with insulin-treated diabetes from acquiring commercial driver's licenses?

A1. A blanket ban against drivers who need insulin may force such drivers to avoid medical attention rather than admit to their diabetes and risk losing their commercial driver's license. We believe a thorough monitoring program developed by a Blue Ribbon Committee of experts and concerned citizens will reduce the overall risk to the public of drivers suffering a hypoglycemic attack while driving. There is also a legal concern raised by the American with Disabilities Act that such drivers should be judged on a case-by-case basis.

Q2. Is it safe to allow commercially licensed drivers with insulin-treated diabetes to drive on Hawaii's streets?

A2. That is a difficult question to answer categorically one way or the other because so much depends on how well the State regulates such drivers. If the regulations are strictly enforced and drivers thoroughly monitored to insure compliance with safe driving standards, then Hawaii's streets and highways will be safer for the driving public.
Q3. What happens if a driver suffers a diabetic hypoglycemic attack while driving? Isn't that dangerous?

A3. Yes, it is dangerous. But that is why it is so important that state regulations screen-out diabetic drivers who are at a greater risk of suffering hypoglycemic attacks and carefully monitor and regulate diabetic drivers that are better able to adjust to the demands of a commercial license.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOREWORD</td>
<td>iii</td>
</tr>
<tr>
<td>FACT SHEET</td>
<td>iv</td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Legislative Intent</td>
<td>1</td>
</tr>
<tr>
<td>State Department of Transportation and Public Review</td>
<td>1</td>
</tr>
<tr>
<td>Endnotes</td>
<td>2</td>
</tr>
<tr>
<td>2. BACKGROUND</td>
<td>3</td>
</tr>
<tr>
<td>Insulin and Diabetes</td>
<td>3</td>
</tr>
<tr>
<td>A Brief History of Commercial Driver's Licenses and Insulin Users</td>
<td>3</td>
</tr>
<tr>
<td>Nationally</td>
<td>3</td>
</tr>
<tr>
<td>Locally</td>
<td>5</td>
</tr>
<tr>
<td>Endnotes</td>
<td>5</td>
</tr>
<tr>
<td>3. APPLICABLE LAW</td>
<td>7</td>
</tr>
<tr>
<td>State Law</td>
<td>7</td>
</tr>
<tr>
<td>Federal Law</td>
<td>7</td>
</tr>
<tr>
<td>49 Code of Federal Regulations, Subpart E</td>
<td>7</td>
</tr>
<tr>
<td>49 Code of Federal Regulations, Subpart B</td>
<td>8</td>
</tr>
<tr>
<td>The Proposed Federal Exemption</td>
<td>8</td>
</tr>
<tr>
<td>Endnote</td>
<td>8</td>
</tr>
<tr>
<td>4. STUDIES, REPORTS, AND COMMENTS RELATED TO DRIVERS WITH INSULIN-TREATED DIABETES</td>
<td>9</td>
</tr>
<tr>
<td>The Federal Aviation Administration Study</td>
<td>11</td>
</tr>
<tr>
<td>Federal Highway Administration (FHWA) Risk Analysis</td>
<td>11</td>
</tr>
<tr>
<td>The University of Montreal Studies</td>
<td>12</td>
</tr>
<tr>
<td>The FHWA Waiver Program Risk Assessment</td>
<td>13</td>
</tr>
<tr>
<td>The FHWA 1998 Study</td>
<td>13</td>
</tr>
<tr>
<td>The Presidential/Congressional Expert Medical Panel</td>
<td>14</td>
</tr>
<tr>
<td>FMCSA 2001 Study</td>
<td>15</td>
</tr>
<tr>
<td>The Pittsburgh Post Gazette Reports</td>
<td>15</td>
</tr>
<tr>
<td>Selected Comments made in Response to the FMCSA's Proposal to Issue Exemptions to ITDM Drivers</td>
<td>16</td>
</tr>
<tr>
<td>U.S. Equal Employment Opportunity Commission (EEOC)</td>
<td>16</td>
</tr>
<tr>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td></td>
</tr>
<tr>
<td>American Diabetes Association (ADA)</td>
<td>16</td>
</tr>
<tr>
<td>Insurance Institute for Highway Safety (IIHS)</td>
<td>17</td>
</tr>
<tr>
<td>Advocates for Highway and Auto Safety (AHAS)</td>
<td>18</td>
</tr>
<tr>
<td>American Association of Motor Vehicle Administrators (AAMVA)</td>
<td>18</td>
</tr>
<tr>
<td>The International Brotherhood of Teamsters (IBT)</td>
<td>19</td>
</tr>
<tr>
<td>The Owner-Operator Independent Drivers Association (OOIDA)</td>
<td>19</td>
</tr>
<tr>
<td>Endnotes</td>
<td>19</td>
</tr>
</tbody>
</table>

5. INSULIN-TREATED DIABETES IN FEDERAL AGENCIES OTHER THAN THE DEPARTMENT OF TRANSPORTATION | 23 |

- The Federal Aviation Administration (FAA) | 23 |
- The Federal Railroad Administration and the Federal Transit Administration | 24 |
- The U.S. Merchant Marine | 24 |
- Endnotes | 24 |

6. INSULIN-TREATED DIABETES IN OTHER STATES | 25 |

- FMCSA's Report to Congress | 25 |
- Utah | 25 |
- Michigan | 25 |
- Delaware | 26 |
- Kentucky | 26 |
- FMCSA's Request for Comments | 26 |
- Alabama | 26 |
- California | 26 |
- Delaware | 27 |
- Illinois | 27 |
- Maryland | 27 |
- New York | 28 |
- Oregon | 28 |
- Texas | 28 |
- Virginia | 28 |
- Wisconsin | 29 |
- Endnotes | 29 |

7. FINDINGS AND RECOMMENDATIONS | 30 |

- Studies, Reports and Comments | 30 |
- Other States | 31 |
- Other Federal Agencies | 31 |
- Equal Employment Opportunity | 31 |
- Conclusion and Recommendation | 31 |
<table>
<thead>
<tr>
<th>State Law and Rules Needed</th>
<th>32</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert Medical Panel Recommendations</td>
<td>32</td>
</tr>
<tr>
<td>Screening of ITDM Drivers</td>
<td>33</td>
</tr>
<tr>
<td>Guidelines for Managing ITDM</td>
<td>33</td>
</tr>
<tr>
<td>Monitoring ITDM Drivers</td>
<td>33</td>
</tr>
<tr>
<td>The Federal Highway Administration Conference Recommendations</td>
<td>34</td>
</tr>
<tr>
<td>Other Recommendations</td>
<td>35</td>
</tr>
</tbody>
</table>

### Appendices

| A. Senate Concurrent Resolution No. 174, Regular Session of 2002 | 36 |
| B. Proposed Legislation Concerning Drivers with Insulin-Treated Diabetes | 38 |
Chapter 1

INTRODUCTION

Pursuant to Senate Concurrent Resolution No. 174, S.D. 1 (2002), the Legislative Reference Bureau was requested to conduct a study on whether the State should allow insulin-treated diabetics to acquire commercial driver's licenses (CDLs) for intrastate purposes.

The State's policy has always been to follow the CDL qualifications established by the federal government, which has, for the most part, prohibited persons with insulin-treated diabetes from acquiring interstate CDLs. Presumably, that policy was due partially to the fact that "more than 5,000 people die each year in crashes involving trucks ..." The State's policy has always been to follow the CDL qualifications established by the federal government, which has, for the most part, prohibited persons with insulin-treated diabetes from acquiring interstate CDLs. Presumably, that policy was due partially to the fact that "more than 5,000 people die each year in crashes involving trucks ..."

Legislative Intent

The Legislature's intent in passing the concurrent resolution, however, was to reassess the State's policy because of studies that reported "drivers with insulin-treated diabetes collectively have lower accident rates than the total population of commercial vehicle drivers, [and that] none of the accidents reviewed ... were attributed to a driver's diabetic condition." Additionally, since the prohibition is only against drivers who are prescribed insulin (as opposed to oral medication to treat diabetes), these drivers have been known to refuse their insulin medication in order to continue driving legally at the risk of the public's safety.

Consistent with the Legislature's motives, the Federal Motor Carrier Safety Administration (FMCSA), the federal agency that regulates commercial trucks and truck drivers appears poised to allow insulin-treated diabetics to acquire CDLs. This action is based on FMCSA's research and finding in its Report to Congress and other publications which analyze the question of issuing CDLs to insulin-treated diabetics. The Report to Congress and this study for the Hawaii State Legislature share a substantial identity of purpose and function as well as an identity in the nature and type of information needed for each study. Therefore, recognizing this substantial identity and the State's long established policy of following federal law, this study depends in part on the research and findings of the FMCSA.

State Department of Transportation and Public Review

Although the state Department of Transportation had previously declined to conduct this study of drivers with insulin-treated diabetes, the Department was very helpful with requested information and useful contacts. Due to time constraints, however, the study lacks the benefit of the Department's and the public's review and should be treated accordingly.
Endnotes

1. Appendix A.
4. "Rigged for Disaster".
Chapter 2

BACKGROUND

Insulin and Diabetes

Insulin is a "hormone, produced by the beta cells of the ... pancreas, that regulates the metabolism of glucose and other nutrients." It is also "any of several commercial preparations of this substance, each absorbed into the body at a particular rate: used for treating [the disease] diabetes."2

Generally, diabetes or diabetes mellitus3 "occurs when a person's body doesn't make enough insulin or can't use insulin properly. When you have diabetes, the sugar builds up in your blood instead of moving into the cells." The build up of sugar in the blood -- hyperglycemia, or low blood sugar -- hypoglycemia, can lead to a myriad of medical complications including nausea, cold sweat, drowsiness, vomiting, loss of consciousness and even coma.5 Although prescription insulin is usually successful in treating diabetes by regulating blood sugar levels, hyperglycemic and hypoglycemic episodes experienced by insulin users are not uncommon. Hence, the operation of any kind of mechanical equipment or motor vehicle may be a problem for diabetics, including those taking insulin medications.

A Brief History of Commercial Driver's Licenses and Insulin Users

Nationally

Since Hawaii law follows federal law, this section is devoted to a history of the federal law under the federal Department of Transportation's Federal Motor Carrier Safety Administration (FMCSA). According to FMCSA's "Notice of Intent to Issue Exemptions and Request for Comments, "[t]he agency established the current standard for diabetes in 1970 because several risk studies indicated that diabetic drivers had a higher rate of accident involvement than the general population."6

Between 1970 and 1987, several attempts were made by the agency and its predecessor agencies to establish rules regarding commercial driver's licenses and insulin users. Then, "[i]n September of 1987, a Conference on Diabetic Disorders and Commercial Drivers was held to review the diabetes standard in light of advances in the care of diabetes. Conference participants (physicians, scientists, federal officials and representatives from the motor carrier industry) recommended that some drivers with diabetes could be certified to drive depending upon insulin-use and under certain conditions (absence of recurrent hypoglycemia, safe driving record etc.)."7

Following the Conference, the agency published a proposal to revise the diabetes standard to allow insulin-using diabetics to operate commercial motor vehicles (CMVs) and sponsored a 1990 risk assessment that estimated various levels of accidents among diabetic drivers depending upon the severity of hypoglycemia.8 The estimated level of accidents was
deemed acceptable and a Notice of Intent to Issue Waivers was published in 1992. This led to a 1993 waiver program, based on a three-year safe driving record while using insulin and medical examinations by the required specialists.

The waiver program, originally part of a research study, was terminated in 1996. The U.S. Court of Appeals for the D.C. Circuit had found that the initial determination that the agency's vision waiver program would not adversely affect the safe operation of CMVs was "devoid of empirical support in the record" and, therefore, contrary to law.9 Although the decision initially affected only the vision waiver program, it had a direct effect on the diabetes program because of the similar approach used to pre-qualify drivers. Those drivers holding waivers at the program's termination were allowed to continue to operate CMVs in interstate commerce under grandfather provisions [(licenses obtained before a law prohibiting such licenses)] at 49 CFR 391.64."10

It also appears the waiver program was in response to concerns regarding the Americans with Disabilities Act (ADA). The ADA prohibits employment discrimination based upon a person's disability that is a substantial limitation upon a worker even after the worker has received treatment or medication. The disease diabetes is considered a disability. The waiver program would have addressed the ADA concern that employment "disqualification based on a disability should be decided on a case-by-case basis by providing individual applicants with the opportunity to prove their ability to operate commercial vehicles safely."11

Hopes for a waiver program resurfaced again when the President signed the Transportation Equity Act for the 21st Century (TEA-21)12 on June 9, 1998. Section 4018 of the TEA-21 directed the Secretary of Transportation to determine if it is "feasible to develop a safe and practicable program for allowing individuals with insulin-treated diabetes millitus [(ITDM)] to operate CMVs in interstate commerce."13

"Investigation of the policies of other DOT modal administrations regarding ITDM showed that only the Federal Aviation Administration (FAA) has a well-developed program. In 1994, the FAA determined that selected ITDM individuals can be considered for special issuance of a third-class Airman Medical Certificate under a screening, glucose management, and monitoring protocol."14

"The FMCSA also assembled a panel of physicians expert in the treatment of diabetes. … Responding with written reports … the panel expressed the opinion that advances in the treatment of diabetes make it possible both to control the disease and to permit the identification of those individuals capable of doing so. … The panel concluded that from a medical standpoint a process was feasible for permitting some individuals with ITDM to operate CMVs."15

"Based on the research presented in the Report to Congress [that was a result of TEA-21], the FMCSA has decided that evidence and precedence indicate the appropriate form for implementing a process would be an exemption program,16 and that type of program is currently defined and authorized in” TEA-21.17
Locally

Obtaining information with respect to prospective commercial drivers with diabetes in the State was very difficult. State and county agencies, including the police department that tracks driver-related statistical information including overall populations, traffic accident rates etc., either do not keep records specific to diabetic drivers, or are slow to respond to requests for information on such drivers. The Bureau was, however, able to interview one experienced commercially licensed driver with diabetes, who provided unconfirmed information regarding diabetic drivers.

The driver believes that, over approximately the past ten years, he has known about thirty commercial drivers who have had diabetes. Of those people, the driver estimated about eighteen had lost their jobs due to the disease. Presumably, these drivers were terminated because the severity of their diabetes required an upgrade in their medication from an oral form to the use of insulin -- which, in effect, disqualified them from holding commercial licenses under federal and state law.

Endnotes

2. Id.
3. Diabetes or diabetes mellitus is either of two chronic forms of diabetes in which insulin does not effectively transport glucose from the bloodstream; a rapidly developing form, affecting children and young adults, in which the body does not produce enough insulin and insulin must therefore be injected (juvenile onset diabetes) or a slowly developing form in which the body's tissues become unable to use insulin effectively (adult-onset diabetes). Random House Webster's College Dictionary, 1991.
7. U.S., Federal Highway Administration, "Conference on Diabetic Disorders and Commercial Drivers' Final Report, 1988".
10. Id.
13. "Notice of Intent to Issue Exemptions and Request for Comments".

14. Id.

15. Id.

16. The exemption program is different from the waiver program established by the Federal Highway Administration in 1993. The FMCSA may grant a waiver for a period of up to 3 months or an exemption for a renewable 2-year period.

17. "Notice of Intent to Issue Exemptions and Request for Comments".
Chapter 3

APPLICABLE LAW

State Law

With respect to drivers with insulin-treated diabetes, state law follows the federal law. Section 286-236, Hawaii Revised Statutes, requires that, "No person shall be issued a commercial driver's license unless that person meets the qualification standards of 49 Code of Federal Regulations, Part 391, Subparts B and E ...."

The Hawaii Administrative Rules, under Section 19-122-3, mirrors the state law by requiring that no instruction permit shall be issued to an applicant unless the applicant:

(6) Meets the qualification standards of 49 CFR, Part 391, Subparts B and E if the applicant expects to obtain a category 4 or commercial driver's instruction permit.

Additionally, according to the state Department of Transportation, any driver that acquires an out-of-state CDL has thirty days to apply for a Hawaii CDL, but only waivers issued by FMCSA are acceptable in Hawaii. The state Director of Transporation may also issue waivers in limited situation.

Federal Law

49 Code of Federal Regulations, Subpart E

49 CFR, Subpart E, Section 391.41 (b)(3), requires in part, that a person is physically qualified to drive a commercial motor vehicle if that person:

(3) Has no established medical history or clinical diagnosis of diabetes mellitus currently requiring insulin for control; …

The federal rules further explain in their instructions to medical examiners that:

[T]he FMCSA has consistently held that a diabetic who uses insulin for control does not meet the minimum physical requirements of the FMCSR [(Federal Motor Carrier Safety Rules)]. Hypoglycemic drugs, taken orally, are sometimes prescribed for diabetic individuals to help stimulate natural body production of insulin. If the condition can be controlled by the use of oral medication and diet, then an individual may be qualified under the present rule.

Additionally, 49 CFR, Subpart E, Section 391.45(c), requires a medical examination and certification of:
(c) Any driver whose ability to perform his/her normal duties has been impaired by a physical or mental injury or disease;

The federal rules further distinguish between diabetes that is controlled with oral drugs and/or diet which is allowed under federal law, as opposed to insulin-treated diabetes which is not allowed:

If insulin is necessary to control a diabetic driver's condition, the driver is not qualified to operate a commercial motor vehicle in interstate commerce. If mild diabetes is present and it is controlled by use of an oral hypoglycemic drug and/or diet and exercise, it should not be considered disqualifying. However, the driver must remain under adequate medical supervision. (49 CFR 391.43)

49 Code of Federal Regulations, Subpart B

49 CFR, Subpart B relates to qualification and disqualification of drivers. This subpart requires commercial vehicle drivers to comply with standard qualifications such as minimum age and literacy. Subpart B also requires drivers to comply with Subpart E that is discussed above.

The Proposed Federal Exemption

The Federal Motor Carrier Safety Administration (FMCSA) proposes to exempt drivers with insulin-treated diabetes from the federal policy prohibiting drivers with insulin-treated diabetes from acquiring CDLs. Since Hawaii follows federal policy with respect to insulin-treated diabetes, it would appear that FMCSA's adoption of an exemption would logically result in an applicable exemption in Hawaii as well. But upon closer inspection of the proposed federal rules, the proposed exemption is allowed under Part 381 of Chapter 49 of the federal rules, as opposed to Part 391 (Subparts B and E) which the State follows pursuant to section 286-236, Hawaii Revised Statutes. Thus, in order for a federal exemption to apply under state law, Part 391 would have to be amended, not Part 381. Additionally, exemptions under Part 391 fall under Subpart G, which the State does not follow.

This is not to say that the State cannot allow drivers with insulin-treated diabetes to obtain CDLs. Rather, it appears that State law will not automatically change should the FMCSA adopt the exemption under Part 381. In any case, the State is free to amend the Hawaii Revised Statutes and applicable State rules to allow an exemption, if it so chooses.

Endnote

1. According to Ms. Peggy Umetsu, state Department of Transportation.
Chapter 4

STUDIES, REPORTS, AND COMMENTS RELATED TO DRIVERS WITH INSULIN-TREATED DIABETES

Studies investigating drivers with insulin-treated diabetes are both numerous and well documented. "[A] variety of evidence suggested that hypoglycemia can be a primary factor in causing crashes." A series of earlier case studies supported this notion.1

Additionally, a study in the Journal of the American Medical Association found that:

[Persons] with type 1 diabetes may not judge correctly when their BG [blood glucose] is too low to permit safe driving and may consider driving with a low BG level even when they are aware of the low level. Health care professionals should counsel their patients about the risk of driving with hypoglycemia and the importance of measuring BG level before driving.2

Other evidence was supplied in controlled laboratory experiments in which hypoglycemia appeared to be the primary factor in causing crashes. "Using a randomized single-blind, crossover design, participants performed on a driving simulator under euglycemia [sic] and hypoglycemia. Under moderate hypoglycemia several significant results were found. These results indicated that moderate hypoglycemia disrupted such driving behavior as steering, swerving, time over midline, and time off-road."3

That finding was supported by another study in England where "it was found that Type 1 diabetics had the most frequent and severe episodes of hypoglycemia."5

"In a study of the frequency of hypoglycemia and the awareness of this event in Type I diabetics conducted in Scotland [(the Gold Study)], the results showed that those patients with impaired awareness had significantly more episodes of severe hypoglycemia than patients with normal awareness.6 It was also found that the patients with impaired awareness experienced a greater proportion of episodes in the evening and those with normal awareness had a greater proportion of their episodes in the early morning."7

"From 1965 to 1991, the epidemiological evidence produced results that were conflicting at best. In this period, there were four studies demonstrating that diabetic drivers had significantly higher rates or number of accidents.8 During this [same] period, there were also seven studies in which the accident rates of diabetic drivers did not significantly differ from those of a control group of drivers without the condition."9

In many of these studies that reported epidemiological evidence, the methodological approaches had flaws such as no adjustment for exposures or for potential confounding, which is one explanation for the conflicting outcomes.10

Four surveys attempted to:
[E]stimate the rate of occurrence of hypoglycemia in accidents involving diabetics. In
one [survey],11 five percent of the survey sample reported an accident due to
hypoglycemia in the period since they began the use of insulin. Another reported that 3.3
percent of the diabetics sampled had been involved in an accident that was related to
hypoglycemia in their lifetime.12 In studying Type I diabetics over an eight-year period,
an additional survey found that 16 percent of reported accidents were due to
hypoglycemia.13 And, lastly, a survey in a two-year period reported that the estimated
annual rate of hypoglycemia-related accidents among diabetic drivers was about 3 per
100.14 This collection of studies does not give a clear, consistent view of the involvement
of hypoglycemia in accidents among individuals with ITDM [(insulin-treated diabetes
mellitus)]. Not only do the estimates differ, but the variety of methods used also do not
permit comparability among studies.15

The Gold study, however, "showed that individuals who had impaired awareness of
hypoglycemia had significantly more episodes of severe hypoglycemia."16 With respect to
awareness of blood glucose levels, the Cox study17 found that "blood glucose awareness training
(BGAT) had a long-term effect on the number of automobile crashes experienced. Those
receiving the training had significantly better long-term (mean of 4.9 years) effects including
fewer lost work days and crashes than control subjects. The BGAT subjects who received
booster training were significantly more accurate at estimating their blood glucose levels and
were more aware of hypoglycemia."18

In other studies concerning older drivers unrelated to commercial motor vehicles,
"elderly men (70 years of age) in Quebec, ... with diabetes were not found to have significantly
higher risk of road accidents compared to a control group with no medical conditions."19

In the Puget Sound area, "a sample of individuals with driving related injuries was
compared to those with no injuries ... [and] those with diabetes had a higher risk of injury and an
even higher risk for those treated with insulin or oral hypoglycemic agents."20

"In the investigation of Alzheimer and vascular dementia in a prospective road and
laboratory study, the researchers had an interesting ancillary finding. The study used three
control groups: an older group of diabetics, an older group with no medical conditions, and a
younger group with no medical conditions. The older diabetic controls were not significantly
different from the older and younger, healthy control groups in relation to driving
performance."21

In a recent case-control study relating to:

[S]ubjects who were aged 65 or older, those involved in crashes in 1996 who were at
fault were compared to two control groups; (1) those involved in crashes who were not at
fault and (2) those who had no crashes. The overall findings showed that there was no
association between diabetes and at-fault crash involvement. This result held across all
of the diabetes characteristics addressed in the study such as insulin use, retinopathy or
neuropathy. While all of these results were not significant, there was one interesting
finding. Among subjects who had been involved in a crash in the four years preceding
1996, there was a significant relationship between diabetes and crash involvement (an
STUDIES, REPORTS, & COMMENTS RELATED TO DRIVERS WITH INSULIN-TREATED DIABETES

adjusted odds ratio of 2.5). For those not involved in crashes in the preceding four years there was no significant association. Even in a study which appears to have clear results concerning diabetes, there is again some type of mixed outcome. In this case, crash experience seems to act as a modifying influence.22

The Federal Aviation Administration Study

In the mid 1980s, the Federal Aviation Administration (FAA), the federal agency responsible for regulating air traffic and control in this country conducted a risk analysis for certifying ITDM individuals as pilots with a Class III private pilot license. The study was based on data from the National Health Interview Survey, the National Health and Nutrition Exam Survey, the General Aviation Pilot and Aircraft Survey and the FAA Accident/Incident Data System. The FAA found that:

(1) 1,620 insulin-taking diabetics would be expected to become Class III pilots if diabetic medical certification criteria were relaxed.

(2) The expected rate of fatalities for insulin-taking diabetic pilots was 4.8 per 100,000 pilot hours versus 3.7 for non-diabetic pilots. The estimated safety risks for newly certified insulin-taking diabetic pilots would, therefore, be about 30 percent higher than that of any general aviation pilot.

(3) Because there is considerable uncertainty surrounding the estimation of the safety risks for diabetic pilots, the actual accident rate experienced by this group could range from about the same rate as other private pilots to twice that rate or more.23

The study seemed to imply that even the estimated, expected 30 percent increased risk was acceptable when compared to other aviation safety risks. For example, the 30 percent increased risk was somewhat modest when compared with the 82 percent increase in accident rates per active Class III pilot from the 16-24-year old group (.28) to the 50-54-year old group (.51). The FAA found the risk acceptable because, in 1996, it instituted a policy to allow some individuals with ITDM to obtain Class III certification.24

The FAA is discussed further in Chapter 5.

Federal Highway Administration (FHWA) Risk Analysis

In the late 1990s, the FHWA commissioned the University of Pittsburgh to conduct a risk analysis to investigate ITDM and the operation of CMVs. As with the FAA study, the FHWA risk analysis was a synthesis of the relevant data available at that time. The major findings of this analysis were:

(1) Estimates using existing data suggest that 1,420 drivers with ITDM might be licensed to operate CMVs in interstate commerce.
(2) If drivers with ITDM were licensed without any restrictions, it was estimated that the risk for hypoglycemia related accidents could be nearly four times the accident risk of non-diabetic drivers.

(3) Regulations concerning previous episodes of severe hypoglycemia could reduce the accident risk by half.

(4) There is some degree of uncertainty surrounding the estimates of risk for drivers with ITDM. The available data suggested that the risk ratio of hypoglycemia-related accidents to overall accidents among non-diabetic drivers range from 0.25 to 4.0.25

The study also pointed out that hypoglycemia unawareness is also a strong risk factor for severe hypoglycemia and concluded that a regulatory program accounting for it could reduce the number and risk of accidents from severe hypoglycemia by a considerable amount.

A subsequent assessment of these findings conducted at the University of Pittsburgh investigated "a variety of dimensions of the problem" by examining factors such as:

[(1) W]hether the excessive number of accidents is significant,

[(2) T]he possibility of subclassifying diabetics relative to the history of severe hypoglycemia,

[(3) T]he risk tradeoff for allowing these individuals to have employment opportunity, and

[(4) T]he level of risk as it is related to other social decisions concerning highway safety, such as allowing 16 year olds to drive or allowing extremely light cars to be driven.

The conclusion drawn from the examination was that the additional risk from insulin-using CMV drivers was within the present range of acceptable risks. The conclusion did itemize the notion that the inclusion of persons with a history of severe hypoglycemia significantly increased the cost to society, through an increased number of expected crashes.26

The University of Montreal Studies

The University of Montreal investigated the costs associated with accidents that involve individuals with certain medical conditions such as visual impairment or diabetes. The researchers measured the accidents by the number of persons injured or killed in the accident. The studies showed that drivers with diabetes did not have significantly more severe accidents than those without the disease. The studies also showed that the average cost per accident for diabetics other than drivers of combination trucks were twice that of drivers in good health.27

The Advocates of Highway and Auto Safety (AHAS), an alliance of consumer, health and safety groups and insurance companies raised questions regarding the analysis of the
The AHAS argues that the study was:

[P]rimarily an attempt to estimate crash costs between drivers with diabetes in general, not just drivers with ITDM, and healthy (or at least non-diabetic) drivers. In terms of crash costs, the study specifically distinguished between the findings for drivers of large trucks compared to drivers of all other trucks, i.e., straight trucks, and other non-combination vehicles. The study found that the cost of crashes for diabetic drivers of straight trucks and other non-combination vehicles, was twice that of drivers in good health. In reaching this finding, the researchers plainly distinguished the impact of diabetes based on the type of truck driven. However, no similar differentiation by type of truck is reported for the findings regarding crash severity of diabetic drivers versus non-diabetic drivers. This raises the question of whether the researchers actually found no distinction or whether the crash severity analysis performed was not conducted based on the type of vehicle.

The FHWA Waiver Program Risk Assessment

A complete risk assessment of diabetic drivers that received grandfather rights in the FHWA waiver program was conducted in February 1996. The assessment showed that drivers with waivers had an accident rate of 2.309 accidents per million vehicle miles traveled (VMT). The comparable measure from the General Estimates System showed a national accident rate of 2.605 per million VMT. The assessment supported the decision to give grandfather rights to these drivers, but the assessment was criticized for hidden bias.

The assessment was also criticized by the AHAS that found:

The FHWA limited the use of the waiver program data solely to support allowing them [the waiver program participants] to continue driving after March 31, 1996. FHWA stated that it would not use the data as the basis for future adjustments to the vision and diabetes standards, nor to reopen the waiver programs. The FMCSA cannot now rely on the Diabetes Waiver program to make any general inference regarding the safety of drivers who participated in that program or of other drivers with ITDM. The Agency must disregard such an obviously flawed data set.

The FHWA 1998 Study

This study compared ITDM drivers of large truck to a sample of CMV operators with commercial driver's licenses (CDLs). The ITDM drivers were either driving under state programs or grandfathered-in under federal law. The study covered driving behavior between 1994 and 1997. Although the "unadjusted data showed that the [accident] rate [per million miles] of the ITDM group (1.950) was significantly higher than that of the comparison group (1.444)" researchers attributed the high ITDM rate to comparison bias and threats and concluded that there was no significant difference in the accident rates or the severity of the accidents between the two groups.
The same report was analyzed in "Monitoring Report On The Drivers of Commercial Motor Vehicles Who Received Grandfather Rights Under 49 CFR 391.64 Based on Diabetes Waivers (1993 to 1996)". Researchers in that analysis chose to compare the ITDM drivers with the national accident rate of 2.272 instead of CMV operators’ rate of 1.444, and concluded that the rate for ITDM drivers was lower than the national accident rate.

Additionally, the AHAS made the following observations with respect to the FHWA 1998 study:

The comparison group, consisting of CDL holders, probably included a large majority of drivers who regularly operate in interstate commerce. Undoubtedly, the comparison groups of drivers were experiencing substantially different types of operating conditions, particularly for persons with medical conditions such as diabetes. The discrepancy between the operating conditions and experience of the study subjects and the comparison group render the conclusions of the study suspect.

[Also,] self-reported data is well known to be unreliable and provides an unknown percentage of responses that are inaccurate or false. It is a well-documented phenomenon that respondents with an economic interest at stake in the outcome are likely to provide incorrect driving history and medical condition information ...

[Finally,] [n]either the FMCSA notice of intent, nor the Report to Congress, specifically detail what adjustments were made to the data in an effort to eliminate comparison bias.34

The Presidential/Congressional Expert Medical Panel

Pursuant to TEA-21, the FMCSA assembled a panel of expert physicians in the treatment of diabetes to investigate and report on the issues concerning the treatment, medical screening and monitoring of ITDM drivers. The panel made the following findings and recommendations:

(1) ITDM drivers should not be disqualified solely because they have long-term medical risks;

(2) Mild hypoglycemia, as opposed to severe hypoglycemia, is less incompatible with driving;

(3) Excluding diabetics from qualifying for commercial licenses based on the number of severe hypoglycemic episodes suffered is difficult because each occurrence is based on circumstances;

(4) There is a correlation between hypoglycemic awareness and recurrent severe hypoglycemic episodes, as shown by the Diabetes Control and Complications Trial data;

(5) Drivers who are prone to severe hypoglycemia should not drive;
(6) Educational disease management training is necessary for potential drivers of CMVs;

(7) The focus of drivers should be on hypoglycemia as it relates to safety;

(8) Driver qualifications should include a minimum period of insulin use;

(9) An evaluation of a driver’s control of diabetes is necessary;

(10) There is a need for a medical assessment by a specialist regarding the adverse effects of diabetes;

(11) ITDM drivers should have detailed annual examinations and quarterly reviews of the maintenance of glucose levels to determine if there is good control; and

(12) Glucose should be monitored (Horton method) before and during the operation of a CMV.

**FMCSA 2001 Study**

The latest FMCSA study "A Study of the Risk Associated with the Operation of Commercial Motor Vehicles by Drivers with Insulin-Treated Diabetes Mellitus" was conducted in 2001. This study found that:

Almost without exception, all results point to the driving safety of CMV operators with ITDM. Moreover, these results have apparently been successful in meeting the available tests for internal and external validity. However, no single study conclusively answers a particular question, regardless of how compelling the results. It becomes a part of the collection of evidence to be assessed. In this context, the results are seen as being consistent with the recent risk assessments for diabetes and the operation of large CMVs. Based on these findings, one should conclude that some diabetic drivers clearly present no excessive risk.

**The Pittsburgh Post Gazette Reports**

Recent articles in the Pittsburgh Post Gazette criticized applicable federal regulations with respect to commercial driver clearance regulations as follows:

(1) People with little or no expertise in federal guidelines for commercial driver medical requirements are clearing truckers to drive;

(2) There is no central reporting process for truckers who fail physicals, allowing drivers to find other examiners who will let them get back on the road;
(3) Medically related fatal crashes are underreported because investigating officers lack expertise to recognize and note such circumstances;

(4) Federal regulations requiring a "licensed medical examiner" to perform physicals may include physician assistants or chiropractors that may not possess specialized training or proficiency to conduct such physicals;

(5) Physicians who find a commercial driver medically unfit are not required to report the driver to federal officials and have no means to report them even if they wanted to; and

(6) Some drivers sign their own medical cards using a phony physician's name.

Selected Comments made in Response to the FMCSA's Proposal to Issue Exemptions to ITDM Drivers

U.S. Equal Employment Opportunity Commission (EEOC)

The EEOC is the federal agency responsible for enforcing Title I of the Americans with Disabilities Act and has a [L]ongstanding interest in this prohibition [against allowing drivers with ITDM to acquire CDLs] due to its impact on the employment opportunities of [those] individuals ... In addition, as the lead federal agency for coordinating federal laws impacting equal employment opportunity ... [the EEOC has] an interest in the implementation of policies and procedures that may affect EEO issues. See Executive Order 12067, 43 Fed. Reg. 28, 967,69 (July 5, 1978) ...

The [ITDM driver] exemption process is consistent with the Americans with Disabilities Act in providing for an individualized assessment of each applicant's ability to perform safely.37

American Diabetes Association (ADA)

The ADA is a nationwide, nonprofit, voluntary health organization founded in 1940 consisting of people with diabetes, health professionals who treat people with diabetes, research scientists, and other concerned individuals. The ADA supports the federal exemption program and offered the following information on advances in medical care for the treatment of diabetes.

Advances in blood glucose monitors, insulin, injection devices, insulin pumps, and self-management education all greatly contribute to improved diabetes self-management....

[Meter technology] ... offer[s] a number of features that make them even more valuable tools in diabetes self-management. Today, meters are portable and can be as small as a pen or credit card weighing between one to eight ounces. Many of the meters have
memories that can record values such as time and date of test results, insulin dosages, one-to four-week averages, and even diet and exercise recordings.... [A] person with diabetes can now know his or her exact glucose level at any minute of the day. In addition, these advances allow physicians to accurately assess their patient's level of control by looking at the actual readings a patient has obtained on his/her meter. This data makes it possible for physicians to accurately assess an individual's risk for problems that might impair his or her ability to operate a commercial motor vehicle...

In 1996, the FDA [Food and Drug Administration] approved new, rapid-acting insulin called Lispro... [that] begins working very soon after it is injected ... 15 minutes before a meal instead of an hour as is customary. This allows the Lispro-user to eat meals on a less rigid schedule than with other forms of insulin. [Also,] injection devices are available that look like a writing pen and carry several doses of insulin... Many people prefer to use insulin pumps ... because the pumps offer a continuous system of insulin delivery.38

Insurance Institute for Highway Safety (IIHS)

The IIHS describes itself as "a leader in finding out what works and doesn't work to prevent motor vehicle crashes in the first place and reduce injuries in the crashes that still occur. The Institute's research focuses on countermeasures aimed at all three factors in motor vehicle crashes (human, vehicular and environmental) and on interventions that can occur before, during, and after crashes to reduce losses."39 The IIHS believes that "the working conditions of interstate truck drivers are not compatible with the medical needs of people with insulin-treated diabetes."40 The IIHS also finds that the federal exemption proposal:

(1) "Assumes drivers will report significant hypoglycemic events ... fully and honestly to their physicians. Drivers anxious to maintain their livelihoods would have an incentive to not disclose such events";

(2) "Physicians do not like to alienate their patients and thus may report that a driver is safe even if clinical evidence ... indicates otherwise";

(3) Drivers have a "clear incentive to avoid reporting crashes and to attribute any crashes to circumstances other than hypoglycemia or other complications from their disease";

(4) Drivers "cannot consistently adhere to" the requirement that drivers should check their blood glucose every 2-4 hours while driving; and

(5) "The glucose monitors currently on the market are subject to manipulations similar to those using hand-written logbooks.... [T]hus, a driver might carry two different monitors, one to monitor his or her glucose level and a second one to record only desirable results with incorrect dates and times."41
Advocates for Highway and Auto Safety (AHAS)

AHAS describes itself as "an alliance of consumer, health and safety groups and insurance companies and agents working together to make America's roads safer. Advocates encourage the adoption of federal and state laws, policies and programs that save lives and reduce injuries. By joining its resources with others, Advocates helps build coalitions to increase participation of a wide array of groups in public policy initiatives which advance highway and auto safety."[42]

The following are selected comments submitted by AHAS:

(1) The FMCSA relies on the data, findings and conclusions of an FHWA study that has not been released to the public, "A Preliminary Study of the Risk Associated with the Operation of Commercial Motor Vehicles by Drivers with Insulin-Treated Diabetes Mellitus, FHWA" (1999). Although the FHWA study carries a reported 1999 date, usually the date of publication and release, the study was, evidently, not completed and never issued by FHWA. (This study was subsequently released in 2001);

(2) The FMCSA has not revised the standard that prohibits persons with ITDM from driving commercial vehicles in interstate commerce;

(3) The FMCSA has not conducted the medical and scientific research necessary to propose a change in the federal medical standards governing driver qualifications;

(4) The FMCSA has not developed a sound medical procedure for conducting individualized testing of each ITDM applicant; and

(5) The criteria used by FMCSA to screen ITDM drivers can only identify ITDM drivers who have had high-risk events in their medical history and cannot predict which drivers will have a high-risk event in the future or when a high-risk diabetes-related medical event will occur.

Despite these objectives, the AHAS does not oppose the issuance of licenses or exemptions to ITDM drivers to operate commercial motor vehicles within their home state. However, the AHAS believes that interstate driving, especially long-haul operations, is dramatically different from intrastate driving and that the current federal standard should be applied without exemption.[43]

American Association of Motor Vehicle Administrators (AAMVA)

The AAMVA describes itself as a tax-exempt organization that represents state and provincial officials in the United States and Canada who administer and enforce motor vehicle laws. The AAMVA strives to develop model programs in motor vehicle administration, police traffic services and highway safety.
The AAMVA is aware that advancements in medicine have helped to regulate and assist in controlling some symptoms associated with diabetes. The AAMVA is also aware that certain types of diabetic drivers can safely operate a commercial motor vehicle. The AAMVA supports the proposed requirements for monitoring a driver’s condition to ensure that individuals who drive commercial motor vehicles are medically fit and stick to a meticulous process to monitor their disease.44

**The International Brotherhood of Teamsters (IBT)**

The IBT is a labor organization whose members include hundreds of thousands of commercial motor vehicle drivers. The IBT supports the FMCSA exemption proposal, but objects to certain FMCSA provisions, including the "three year rule" that requires applicants to possess three years of commercial driving experience to qualify for an interstate CMV license.45

**The Owner-Operator Independent Drivers Association (OOIDA)**

The OOIDA is a not-for-profit corporation with its principal place of business in Missouri. It has 68,000 members nationwide and in Canada that collectively own and operate more than 117,000 heavy-duty trucks and small truck fleets.

The OOIDA believes that advances in the medical sciences have made it easier for conscientious individuals to control their diabetes. Accordingly, the OOIDA supports the FMCSA provision that requires evaluation of CMV exempt drivers on a case-by-case basis.46

**Endnotes**


4. There are two types of diabetes. Type 1 occurs when the body does not produce any insulin. People with type 2 diabetes either do not produce enough insulin or their cells ignore the insulin. Nearly 95% of people with diabetes have type 2. http://familydoctor.org/handouts/350.html.


7. Id., at 16.


10. Id., at 16.


15. Id., at 17 and 18.

16. Id., at 18.


23. Id. at 20.
24. Id. at 20.
25. Id.
26. Id. at 22.
27. Id. at 44.
29. Id.
30. The GES is operated by the National Highway Traffic Safety Administration and is a survey of police reports in the United States.
31. Report to Congress at 44.
33. Report to Congress at 45 and 46.
41. Id.
45. Byrd, LaMont, Director, IBD Safety and Health Department, Letter to U.S., Department of Transportation, Federal Motor Carrier Safety Administration, October 1, 2001.

Chapter 5

INSULIN-TREATED DIABETES IN FEDERAL AGENCIES OTHER THAN THE DEPARTMENT OF TRANSPORTATION

The Federal Aviation Administration (FAA)

The FAA has a program that permits special issuance of third-class airman medical certificates to certain insulin-treated diabetes mellitus (ITDM) individuals. "A third-class airman medical certificate is required to exercise the privileges of a private pilot certificate.... [I]t had been the long standing policy of the Federal Air Surgeon not to consider an individual for special issuance of a medical certificate if there is a clinical diagnosis of ITDM. The policy was based on the... long term medical risks associated with diabetes and, the greater concern, the risk of hypoglycemia."\(^1\)

In 1992, the FAA allowed selected ITDM air traffic control specialists (ATCS) to continue their safety-related duties. The ATCSs were individually screened, and if accepted, were returned to duty with intensive monitoring under a well-designed medical protocol. Prior to the program for ATCSs, the ADA [(American Diabetes Association)] petitioned the FAA to amend its policy to allow the issuance of airman medical certificates to ITDM individuals on a case-by-case basis.\(^2\) Eventually, the FAA allowed the issuance of such certificates with the following restrictions:

1. ITDM individuals may be issued only a third-class airman medical certificate;
2. ITDM individuals may exercise only the privileges of a student;
3. ITDM individuals are prohibited from operating an aircraft as a required crewmember on any flight outside the airspace of the United States of America; and
4. ITDM individuals are required to be in compliance with the proposed protocol while exercising the privileges of a third-class airman medical certificate.

The protocol used by the FAA has three facets:

1. Screening components (history of hypoglycemia, diabetes and accidents, etc.);
2. Glucose management (prior to and during flight and prior to landing an aircraft, blood glucose testing procedures, etc.); and
3. Monitoring third-class airmen during the period when the medical certificate is active.\(^3\)
The Advocates of Highway and Auto Safety offered the following comments to the FAA policy:

The FAA limits the program only to airman certificates for the operation of personal not commercial or passenger aircraft, an important distinction which the FMCSA glosses over.

In determining the scope of the FAA program, the Federal Air Surgeon specifically considered and rejected extending the FAA program to first- and second-class airman certificates which permit the exercise of commercial and passenger airline pilot privileges. The Federal Air Surgeon considered the freedom of an airman, exercising the privileges of a private pilot certificate, to accept risks to his/her person and property that are not acceptable in the exercise of commercial or airline transport pilot privileges with their second and first-class certificates. As a result, the FAA program does not permit persons with ITDM to operate commercial aircraft engaged in either the transport of freight or passengers under circumstances equivalent to the operation of large trucks and buses operated by CDL holders.  

The Federal Railroad Administration and the Federal Transit Administration

"The determination of whether an individual with ITDM can operate some type of conveyance in the industries regulated by these agencies is made by medical personnel of the companies involved. The determination is made on a case-by-case basis usually involving medical judgment by a physician."  

The U.S. Merchant Marine

Pursuant to Coast Guard regulation, a U.S. Merchant Marine is required to have a valid U.S. Merchant Mariner's Document (MMD). Applicants for a MMD are required to submit a physical examination report completed by a U.S. licensed physician within one year of application. Upon request of the examining physician, a physical waiver may be granted by the Commandant of the Coast Guard in extenuating circumstances that warrant special considerations. However, waivers are not normally granted to applicants with insulin-dependent or poorly controlled diabetes.

Endnotes

1. Report to Congress at 29.
2. Id. at 29 and 30.
3. Id. at 31 and 32.
5. Report to Congress at 28.
6. Id. at 29.
Chapter 6

INSULIN-TREATED DIABETES IN OTHER STATES

Individual states address the issue of drivers with insulin-treated diabetes in a variety of ways. The Federal Motor Carrier Safety Administration (FMCSA) found in its recent Report to Congress that most states follow the standards set by the federal government of not licensing drivers with insulin-treated diabetes.\(^1\) The American Diabetes Association (ADA), however, claims that "40 states allow some people with insulin-treated diabetes to operate commercial vehicles in intrastate commerce."\(^2\)

The ADA also claims that "these states have not reported any problems with drivers with insulin-treated diabetes."\(^3\) In fact, according to the ADA, Kansas' Transportation Manager for the Kansas Corporation Commission is "very satisfied with the [Kansas diabetes] waiver program... [and is] not aware of any accidents in which our waiver drivers have been involved." He concluded that, "[w]e believe these waiver drivers quite possibly are more careful than the average drivers."\(^4\)

FMCSA's Report to Congress

FMCSA's Report to Congress studied four states -- Utah, Michigan, Delaware, and Kentucky. The following is a short summary of each state:

**Utah**

As of 1997, Utah allows insulin-treated diabetics to obtain a medical waiver to operate commercial motor vehicles in intrastate commerce. The Utah law requires an extensive medical history check for the past five years, a driving record check, and a complete medical evaluation by an endocrinologist or internist. A Utah licensee must also submit to on-going monitoring and re-evaluation procedures that require self-testing and recordation by the licensee. The license must be renewed every six months or annually, depending upon the licensee's health care professional's recommendation.

**Michigan**

Michigan also allows medical waivers for drivers with insulin-treated diabetes. A waiver applicant must provide the State with the applicant's medical and driving history, as well as undergo a medical evaluation by the applicant's personal physician. Like Utah, applicants are also required to self-monitor blood glucose concentrations. Additionally, applicants over the age of forty are required to pass a maximal exercise stress test and all applicants are re-evaluated by a specialist every six months.
Delaware

Delaware only restricts drivers with insulin-treated diabetes from driving commercial vehicles over 26,000 pounds. There are no insulin-related restrictions for drivers of vehicles that weigh between 10,000 pounds and 26,000 pounds. Waivers are not permitted for drivers who operate vehicles that transport passengers or hazardous materials.

Waivers are given to drivers that were previously employed on a full-time basis in the operation of motor vehicles over 26,000 pounds prior to July 19, 1985 and drivers must not have received more than three serious moving violations since July 19, 1985. Waivers are good for two years unless reduced by a driver's physician.

Kentucky

Kentucky provides intrastate medical waivers for drivers that have failed to meet the federal standards under 49 CFR 391, Subpart E. The waiver is based on past driving and medical reports, including uncontrolled (e.g. shock, coma) diabetic episodes. Drivers are subject to re-evaluation at any time, but not less than once a year.

FMCSA's Request for Comments

In the FMCSA’s Notice of Intent to Issue Exemptions and Requests for Comments, nine states responded with comments. They were Alabama, California, Delaware, Illinois, Maryland, Oregon, Texas, Virginia and Wisconsin. The following are short summaries of those comments:

Alabama

Alabama follows the federal standards and does not allow insulin-treated diabetes mellitus individuals to acquire commercial driver's licenses, although it does have drivers who were "grandfathered" from an earlier program. In its comments, Alabama appeared to be concerned with the federal proposal requiring insulin-treated diabetic applicants to possess three years of prior commercial driving experience. Since the only way an applicant can gain three years experience is by acquiring a commercial driver's licenses from a state for intrastate purposes, Alabama is concerned that their policy of not issuing commercial driver's licenses will unnecessarily frustrate applicants with no alternatives in Alabama.5

California

For many years, California has issued intrastate restricted licenses to commercial drivers who did not meet the federal physical qualification standards. However, because of the risk of hypoglycemia, the licensing of insulin-dependent commercial drivers in California is rare. Those who are licensed are generally diabetics who were initially controlled with oral drugs and progressed to insulin use. Typically, their license will include a scope of employment restriction tailored to the individual's current job. This allows them to continue working, but not to expand the type or amount of commercial driving. They are also restricted from transporting hazardous materials.
materials, or from operating vehicles requiring a passenger endorsement. California relies heavily on medical information from the driver's treating physician before making the decision to issue such a restricted license.  

Thus, California opposes the federal exemption proposal based on its experience with licensing insulin-dependent drivers and on the 1999 study "Hypoglycemia and the Decision to Drive a Motor Vehicle by Persons with Diabetes" published in the Journal of the American Medical Association discussed earlier in chapter 4.  

**Delaware**  

As mentioned previously, Delaware only restricts drivers with insulin-treated diabetes from driving commercial vehicles over 26,000 pounds. There are no insulin-related restrictions for drivers of vehicles that weigh between 10,000 pounds and 26,000 pounds. Waivers are not permitted for drivers that operate vehicles that transport passengers or hazardous materials.  

Delaware supports the federal exemption proposal and has had an intrastate licensing program for the past fifteen years "with no perceivable negative effect on highway safety."  

**Illinois**  

Illinois authorizes intrastate insulin-using drivers to operate CMVs with a gross vehicle weight rating (GVWR) or gross combination weight rating (GCWR) of 12,001 pounds or more, provided the driver was eligible and licensed and was engaged in the operation of such vehicles prior to July 29, 1986. In addition, Illinois authorizes intrastate insulin-using drivers to operate CMVs under certain restrictions.  

"At this time, Illinois has no data which would indicate insulin-using drivers are involved in more crashes than non-insulin-using drivers thereby posing a greater safety risk..... [Illinois] would not object to the issuance of these exemptions by FMCSA provided there is strict oversight and careful scrutiny of each applicant."  

**Maryland**  

Maryland recently discontinued its "pilot program" for CDL waivers for diabetic drivers who were insulin dependent.  

In a letter to the federal Docket Management Facility, U.S. DOT, Dr. John D. Stafford, Associate Director of Maryland's Motor Vehicle Administration explained,  

A considerable number of our CDL diabetic waiver population were individuals who had more than a generation of end-organ(s) exposure to their diabetic disease process, as well as other chronic disease conditions which could adversely affect their ability to drive safely. Also, we did not have the guidelines in place for glucose monitoring while performing transportation activities. Disturbingly, some attending physicians would "sign off" on their patients to certify them as safe drivers in spite of highly abnormal HbA1c levels that indicated poor diabetic management control.
New York

New York has special regulations for bus drivers that allow insulin-dependent bus drivers to operate buses as long as there have been no incidents of hyperglycemic or hypoglycemic shock within the previous two years. The driver must remain under medical supervision. A written certification by the driver's personal physician must be provided at six-month intervals. The certifications are kept by the employer in the driver's file. To date, New York is unaware of any bus accidents involving an insulin-dependent bus driver.

Other drivers who have diabetes, including CDL holders who do not drive buses, are not regulated unless they suffer a loss of consciousness. They are then subject to certain regulations and may have to be incident free to continue driving prior to any approval by the agency's medical consultant who reviews loss of consciousness cases.9

Oregon

Oregon has had experience in issuing intrastate waivers to insulin-using diabetic drivers of CMVs. Oregon has provided limited exemptions for intrastate waivers of physical disqualification since 1984. A portion of that program provides that persons with insulin-using diabetes may be granted an intrastate waiver if they meet certain medical requirements. Of the intrastate waivers currently issued, over one-fourth (125) are for insulin-using diabetes.

Oregon maintains crash data for intrastate transportation and "that data shows no incidence directly related to commercial vehicle accidents where complications from diabetes were a causation factor in the accident.... [A waiver is denied] when there has been one or more severe hypoglycemic reactions within two years of the date of application, unless there is treating specialist opinion to the contrary."10

Texas

Texas does not issue exemptions for drivers with insulin-treated diabetes and has several concerns with the federal exemption proposal including:

1) CDL applicants may "doctor shop" in order to meet any documentation requirements that may be imposed;

2) Lack of procedures and penalties for applicants required to self-report hypoglycemic reactions; and

3) Better direction regarding the states' role with respect to the proposal.11

Virginia

Virginia appeared to be concerned with the federal exemption procedures as it relates to the states. Virginia would "strongly urge FMCSA to develop a means to directly notify the
applicable state licensing authority of FMCSA's decision with regard to an individual's request for a diabetes exemption and of any action taken by FMCSA pertaining to any exemption, once granted."12

**Wisconsin**

Wisconsin allows insulin dependent drivers to operate as intrastate CMV drivers if they have two physicians certify they are qualified. Drivers are also under a two-year follow-up review. Wisconsin also has approximately 100 drivers in the federal vision exemption program. This program has allowed many CMV drivers with good driving records to keep their interstate trucking jobs. "If the [federal] diabetes waiver program allows this opportunity for CMV drivers with good driving records, and it has the rigorous qualifications as detailed in the notice, we support it."13

### Endnotes

1. Report to Congress at 32.


3. Id.

4. Id.


Chapter 7

FINDINGS AND RECOMMENDATIONS

There are no easy answers when it comes to determining whether drivers with insulin-treated diabetes should be allowed to acquire commercial driver's licenses (CDL) in Hawaii. On the one hand, the interest of the motoring public is paramount and every effort should be made to insure the public's health, safety and welfare. On the other hand, the interests of drivers with insulin-treated diabetes mellitus (ITDM) must also be recognized, especially in light of the new and emerging medical treatment of diabetics, as well as the equal employment opportunity obligations of government to provide ITDM drivers with every opportunity to prove their driving worthiness on the road.

Generally, this study has focused on several areas of concern that relate to ITDM drivers: studies, reports and comments, how other states treat ITDM drivers, how other federal agencies treat ITDM drivers, and the Equal Employment Opportunity Commission (EEOC) issue.

Studies, Reports and Comments

The Federal Motor Carrier Safety Administration's (FMCSA) Report to Congress included studies that found hypoglycemia to be a factor in causing traffic accidents, but the FMCSA also found that many studies were impeded by conflicting variables, flawed methodological approaches and other issues that compromised conclusions critical of FMCSA's proposed exemption. Additionally, when diabetic drivers were compared with other medical risks and the driving public-at-large, the differences in the comparisons appeared either statistically insignificant or insufficient to maintain a blanket ban against diabetic drivers.

Opponents of the federal exemption appeared unpersuaded by FMCSA's position and were quick to cite other opposing studies and reports including:

(1) The Journal of American Medical Association's "Hypoglycemia and the Decision to Drive a Motor Vehicle by Persons With Diabetes," that was critical of the ability of persons with diabetes to operate motor vehicles;

(2) The Federal Aviation Administration's "insulin-treated diabetes" policy for pilots that allows airman certificate exemptions only for personal aircraft and not commercial or passenger aircraft; and

(3) The comprehensive arguments made by the federal exemption's toughest critics, including the Advocates of Highway and Auto Safety (AHAS) and the Insurance Institute for Highway Safety (IIHS). It is important to note, however, that the AHAS and IIHS do not oppose exemptions for ITDM drivers for intrastate purposes.
Other States

The evidence with respect to other states showed a variety of experiences with ITDM drivers. Interestingly, of the states that responded to the FMCSA's request for comments on its exemption proposal, the only two that categorically prohibited waivers or exemptions (including "grandfathered" drivers) were Maryland and Texas. Both states had a number of concerns, but appeared to be most concerned with procedural and monitoring issues. These issues appear resolvable and were addressed by the Presidential/Congressional Expert Medical Panel under TEA-21.

Other Federal Agencies

Of the four federal agencies (other than the Department of Transportation) reviewed by the FMCSA in its Report to Congress, three of the agencies provided for the needs of ITDM drivers. As mentioned earlier, the FAA policy for ITDM pilots does not extend to commercial or passenger airlines. This restriction may prove of interest in light of the concerns expressed by the EEOC.

Equal Employment Opportunity

Another issue that was probably understated but appeared to be of significant importance was the equal employment argument raised by the EEOC. The FMCSA's decision to seek an exemption may have been influenced by a possible EEOC action on behalf of prospective ITDM drivers. But since the FMCSA is presently seeking that exemption, the equal employment opportunity issue appears moot -- for now. If the State, however, decides not to provide the same driving privileges to ITDM drivers, the State may eventually face the same equal employment opportunity concern faced by FMCSA.

Conclusion and Recommendation

There is considerable evidence and arguments supporting the position that drivers with insulin-treated diabetes should be allowed to acquire commercial driver's licenses for intrastate purposes. Considering the:

1. Inconclusiveness and inability of studies and reports conducted thus far to convincingly prove that ALL drivers with ITDM should not be allowed to acquire CDLs;

2. Unremarkable risk associated with ITDM drivers when compared with other categories of driving risks and the driving public-at-large;
(3) Equal employment opportunity considerations of ITDM drivers raised by the EEOC;

(4) Experiences of other states and federal agencies that accommodate ITDM drivers; and

(5) The latest improvements made in the medical treatment and care of diabetics;

the Bureau recommends that the State consider allowing drivers with insulin-treated diabetes to acquire commercial driver's licenses for intrastate purposes.

**State Law and Rules Needed**

In order to accomplish this, state law and related administrative rules must be amended and drafted accordingly. A bill to amend the state law is included under Appendix B. Proposed rules to implement that amendment, however, are not included because it requires the expertise and knowledge of several groups of individuals that are familiar with the myriad of issues relating to ITDM drivers. Also, the drafting of rules is an executive function that is outside the purview of the Legislature and this study. To that end, the Bureau recommends the establishment of a Blue Ribbon Committee consisting of representatives from the following groups to draft the rules that will guide the state Department of Transportation in regulating ITDM drivers:

1. The Federal and State Departments of Transportation;
2. Associations representing commercial driver licensees;
3. The medical community;
4. Private organizations including the American Diabetes Association, the Insurance Institute for Highway Safety and Advocates for Highway and Auto Safety; and
5. Other interested parties.

Proposed language establishing the Blue Ribbon Committee is included in the proposed legislation in Appendix B.

**Expert Medical Panel Recommendations**

The Bureau also suggests that the Committee consider the findings and recommendations made by the Presidential/Congressional Expert Medical Panel under TEA-21. The Medical Panel recommended a three-component program that included:
Screening of ITDM Drivers

This component identifies qualified applicants and examines the applicant's experience and safety in operating CMVs, the applicant's history of hypoglycemia, and the results of examinations by the required medical specialists (endocrinologists and ophthalmologists);

Guidelines for Managing ITDM

This component includes supplies to be used and the protocol for monitoring and maintaining appropriate blood glucose levels; and

Monitoring ITDM Drivers

This component addresses the required medical examinations and the schedule for their submission, including how glucose measures should be taken and reviewed, and specifies how episodes of severe hypoglycemia and accidents should be reported.

Additionally, the Medical Panel found and recommended that:

(1) ITDM drivers should not be disqualified solely because they have long-term medical risks;

(2) Mild hypoglycemia, as opposed to severe hypoglycemia, is less incompatible with driving;

(3) Excluding diabetics from qualifying for commercial licenses based on the number of severe hypoglycemic episodes suffered is difficult because each occurrence is based on circumstances;

(4) There is a correlation between hypoglycemic awareness and recurrent severe hypoglycemic episodes, as shown by the Diabetes Control and Complications Trial data;

(5) Drivers who are prone to severe hypoglycemia should not drive;

(6) Educational disease management training is necessary for potential drivers of CMVs;

(7) The focus of drivers should be on hypoglycemia as it relates to safety;

(8) Driver qualifications should include a minimum period of insulin use;

(9) An evaluation of a driver's control of diabetes is necessary;

(10) There is a need for a medical assessment by a specialist regarding the adverse effects of diabetes;
(11) ITDM drivers should have detailed annual examinations and quarterly reviews of the maintenance of glucose levels to determine if there is good control; and

(12) Glucose should be monitored (Horton method) before and during the operation of a CMV.

The Federal Highway Administration Conference Recommendations

The Blue Ribbon Committee may also wish to consider the recommendations made by the Federal Highway Administration in its September 1987 Conference on Diabetic Disorders and Commercial Drivers that eventually led to the federal waiver program of 1993. The Conference found that certified commercial drivers who develop diabetes mellitus after driving for five years and who require insulin therapy may continue to be certified if they met the following criteria:

(1) Absence of recurrent hypoglycemia that results in loss of consciousness or seizure;

(2) Absence of seizure or coma without antecedent prodromal symptoms of hypoglycemia;

(3) Absence of recurrent diabetic ketoacidosis or hyperosmolar non-ketotic coma; and

(4) Documentation of regular medical follow-up.

The Conference also recommended that:

(1) Persons with diabetes mellitus who use insulin and who have no demonstrated history of safety on the highway as commercial drivers should not be eligible for certification;

(2) All persons with diabetes mellitus who do not require insulin therapy should be eligible for certification as commercial drivers unless disqualified by an organ complication of diabetes as defined under current federal standards;

(3) Certified commercial drivers requiring insulin for diabetes management should be considered eligible for continued certification;

(4) All drivers with diabetes should have annual examinations for visual impairment, neurological function, and cardiovascular disease (including hypertension);
(5) If poor control of the diabetic state based on the suggested guidelines of the American Diabetes Association exists, certification should be deferred until control is improved; and

(6) Drivers taking oral agents should be informed about possible interactions of these drugs with other medications they may be taking and about possible hypoglycemic risks associated with missed meals.

Other Recommendations

Finally, the following recommendations are made to address other concerns not addressed above:

(1) Establish an administrative position in the State DOT to be partially funded by fees paid by ITDM drivers to monitor drivers -- including unannounced random blood glucose testing;

(2) Prohibit ITDM drivers from "doctor-shopping" and require examining physicians to register with the State DOT and report all medical examinations given to applicants, including failed examinations;

(3) Establish a graduated program to phase-in ITDM drivers - initially from eight-hour days (forty-hour week) for a designated period of time;

(4) Establish a Blood Glucose Awareness Training (BGAT) program for ITDM drivers; and

(5) Establish a licensing program that is renewable on an annual or semi-annual basis.
SENATE CONCURRENT RESOLUTION

REQUESTING THE LEGISLATIVE REFERENCE BUREAU TO CONDUCT A STUDY REGARDING THE INABILITY OF INSULIN USERS TO OBTAIN A COMMERCIAL DRIVER'S LICENSE.

WHEREAS, the United States Department of Transportation (USDOT) has jurisdiction to regulate commercial drivers operating vehicles in interstate commerce throughout the United States; and

WHEREAS, current DOT rules prohibit all individuals with insulin treated diabetes from obtaining a commercial driver's license for interstate travel; and

WHEREAS, in 1993, the Federal Highway Administration embarked on a program to evaluate the safety of drivers with insulin treated diabetes; and

WHEREAS, the results of the Federal Highway Administration's study indicate that drivers with insulin treated diabetes collectively have lower accident rates than the total population of commercial vehicle drivers, and none of the accidents reviewed during the three-year survey period were attributed to a driver's diabetic condition; and

WHEREAS, in 2000 the USDOT indicated to the United States Congress that it may authorize certain drivers with insulin treated diabetes to operate commercial motor vehicles after participating in a screening process; and

WHEREAS, in the past, the Federal Government has also authorized individual states to allow persons with insulin treated diabetes to operate commercial vehicles in intrastate transportation; now, therefore,

BE IT RESOLVED by the Senate of the Twenty-first Legislature of the State of Hawaii, the House of Representatives concurring, that the Legislative Reference Bureau (LRB) conduct
a study regarding the inability of individuals with insulin
treated diabetes to obtain a commercial driver's license; and

BE IT FURTHER RESOLVED that the LRB's study include
criteria and recommendations for authorizing individuals with
insulin treated diabetes to operate commercial vehicles within
the State of Hawaii; and

BE IT FURTHER RESOLVED that the LRB report its findings and
conclusions to the Legislature no later than twenty days prior
to the convening of the Regular Session of 2003; and

BE IT FURTHER RESOLVED that a certified copy of this
Concurrent Resolution be transmitted to the Legislative
Reference Bureau.

I hereby certify that the foregoing is a true
and correct copy of Senate Concurrent Resolution
No. 174 SD1, which was duly adopted by the Senate
of the State of Hawaii on April 11, 2002,
with the concurrence of the House of Representatives
Dated: May 08, 2002

Assistant Clerk of the Senate
Report Title:
Insulin Treated Diabetes; Commercial Driver's License

Description:
Allows drivers with insulin-treated diabetes to acquire commercial driver's licenses for intrastate purposes by creating a blue ribbon committee to draft proposed rules and by providing enabling legislation.
RELATING TO DRIVERS WITH INSULIN-TREATED DIABETES.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

SECTION 1. The purpose of this Act is to authorize the
department of transportation to allow insulin-treated diabetics
to acquire commercial driver's licenses for intrastate purposes.
Part I establishes a blue ribbon committee to draft proposed
administrative rules for this purpose and part II provides the
statutory authorization.

PART I

SECTION 2. There is established within the department of
transportation for administrative purposes a blue ribbon
committee to draft proposed administrative rules necessary to
allow insulin-treated diabetics to acquire commercial driver's
licenses for intrastate purposes. The committee may consider
the recommendations of the Presidential/Congressional Expert
Medical Panel under the federal Transportation Equity Act for
the Twenty-First Century and the recommendations made by the
Federal Highway Administration's Conference on Diabetic
Disorders in September of 1987.
The committee shall consist of at least five members. The director of transportation, or the director's designated representative, shall serve as chairperson of the committee. The remaining members shall be appointed by the governor and represent the following areas:

1. The federal department of transportation;
2. Associations representing commercial driver licensees;
3. The medical community; and
4. Other organizations having an interest in diabetes or highway safety, as determined by the chairperson of the committee.

The committee shall serve without compensation and submit its proposed rules to the legislature and to the department of transportation no later than twenty days prior to the convening of the regular session of 2004. The committee shall terminate upon the adjournment of the regular session of 2004.

PART II

SECTION 3. Section 286-236, Hawaii Revised Statutes, is amended to read as follows:

"§286-236 Commercial driver's license qualification standards. (a) [No] Except as provided under subsection (g), no person shall be issued a commercial driver's license unless that person meets the qualification standards of 49 Code of
Federal Regulations, Part 391, Subparts B and E, has passed a knowledge and driving skills test for driving a commercial motor vehicle which complies with minimum federal standards established by federal regulation enumerated in 49 Code of Federal Regulations, Part 383, Subparts G and H, and has satisfied all other requirements of the Commercial Motor Vehicle Safety Act (CMVSA) of 1986 (Title XII, Public Law 99-570) in addition to other requirements imposed by state law or federal regulation. The tests shall be prescribed by the director and administered by the respective county examiner of drivers. A person who is not physically qualified to drive under 49 Code of Federal Regulations §391.41(b)(1) or (2) and who is otherwise qualified to drive a motor vehicle may be granted an intrastate waiver by the director. The process for granting intrastate waivers shall be the same as that for interstate waivers in 49 Code of Federal Regulations, Part 391.49, except that the intrastate waiver requests shall be submitted to the director.

(b) Pursuant to chapter 91, the director may authorize a third party examiner to administer the driving skills test specified in this section, provided:

(1) The test is the same as that administered by the respective county examiners of drivers; and
(2) The third party examiner has entered into an agreement with the State which complies with requirements of 49 Code of Federal Regulations, §383.75.

(c) The examiner of drivers may waive the driving skills test specified in this section for a commercial driver's license applicant who meets the requirements of 49 Code of Federal Regulations, §383.77.

(d) A commercial driver's license or commercial driver's instruction permit shall not be issued to a person while the person is subject to a disqualification from driving a commercial motor vehicle, or while the person's driver's license is suspended, revoked, or canceled in any state; or while the person holds a driver's license issued by any other state unless the person first surrenders that license.

(e) A commercial driver's instruction permit may be issued to an individual who holds a valid driver's license, meets the qualification standards of 49 Code of Federal Regulations, Part 391, Subparts B and E, and has passed the written tests required for the desired class of a commercial driver's license.

(f) The commercial driver's instruction permit shall not be valid for a period in excess of six months. When driving a commercial motor vehicle, the holder of a commercial driver's instruction permit shall be accompanied by a person licensed to
operate that category of commercial motor vehicle. The licensed
person shall occupy the seat beside the individual for the
purpose of giving instruction in driving the commercial motor
vehicle.

(g) Notwithstanding any other law or provision under this
section to the contrary, drivers with insulin-treated diabetes
shall not be prohibited from acquiring a commercial driver's
license; provided that such drivers are required to:

(1) Otherwise qualify for a commercial driver's license as
provided by law; and

(2) Qualify under rules (regulating insulin-treated
diabetics) that shall be adopted by the director
pursuant to chapter 91 for the purposes of this
subsection."

SECTION 4. Statutory material to be repealed is bracketed
and stricken. New statutory material is underscored.

SECTION 5. This Act shall take effect upon its approval.

INTRODUCED BY: _____________________________