

# **INJURY DATA COLLECTION PROGRAM**



## **2002-2003**

**CONDUCTED BY THE:  
HOCKEY DEVELOPMENT CENTRE FOR ONTARIO**



## TABLE OF CONTENTS

Fact Sheet .....	1
Introduction .....	2
Methodology .....	2
Injury Data Report Form .....	3
Reports Per Age Group/Level of Play .....	4
Injuries Transported.....	5
Mode of Transportation .....	5
Type of Medical Care Provided .....	6
Location of Injury .....	7-8
Cause of Injury .....	9
Ice Location of Injury .....	10
Injury by Position .....	11
Injury by Period.....	12
Concussions .....	13
Spinal Profile.....	14-16
Dental Profile .....	17-18
Neck Profile .....	19-20
Head Profile.....	21-22
Injury by Level.....	23-25

**INJURY DATA COLLECTION PROGRAM**  
**FACT SHEET**

When a review of the Injury Data Collection Program (IDCP) is done, there are several factors that should be considered:

- The total number of players, registered and non-registered in Ontario.
- The total number of games played and therefore the exposure of each player to ice time over the entire hockey season.
- 1,717 injury forms received during 2002-03 reporting period

Ontario Registration Figures for 2002-2003

Registered Players..... 262,508

The Hockey Development Centre would like to acknowledge the support of the  
Dr. Tom Pashby Sports Safety Fund for providing assistance in the areas of  
education and prevention of hockey-related injuries.



## **INTRODUCTION**

In 1987, the Hockey Development Centre for Ontario (HDCO) and the Ministry of Tourism and Recreation committed themselves to the long-term planning and implementation of safety programs for hockey. Research of various types has been completed over the past fifteen years with many recommendations either implemented already or included in the HDCO Safety Strategy. This Safety Strategy is the basic framework of planning for safety by the HDCO.

It has become increasingly apparent that statistical information is essential for planning, monitoring and implementing programs for hockey in Ontario. Unless detailed injury data can be gathered, many misconceptions and opinions will enter into the decision making process. Therefore, it is the HDCO's mandate that hockey in Ontario requires an on-going, statistically sound Injury Data Collection Program (IDCP).

The HDCO Safety and Research and Trainers Committees developed an Injury Data Collection Program that has several advantages over previous studies:

- The IDCP is administered on a yearly basis.
- Involvement is province-wide, including all minor hockey associations.
- Yearly reports are produced, which are meaningful and comprehensive for the grassroots hockey association and volunteers.
- The IDCP will assist in verifying other hockey-related studies.

## **METHODOLOGY**

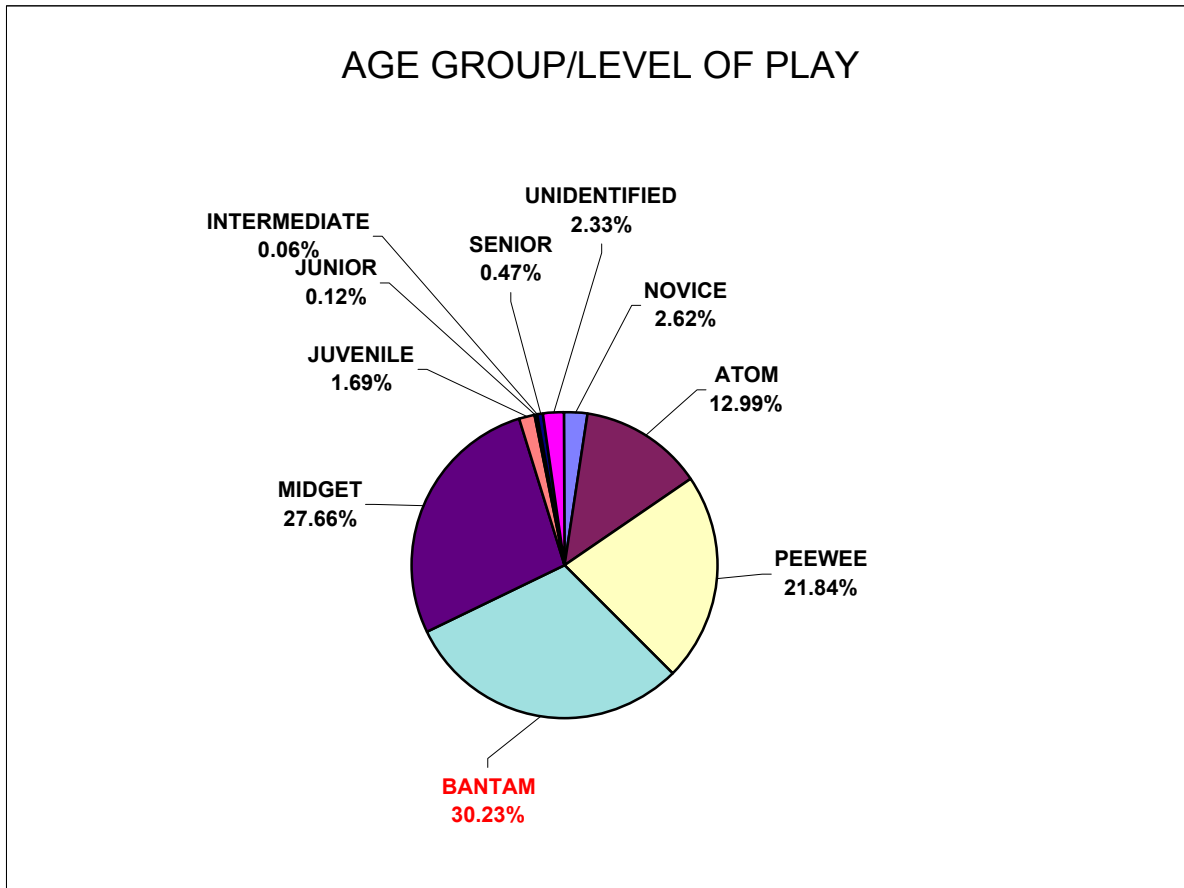
Through consultation with the HDCO Board of Directors, Safety Research Committee, Trainers Committee and the Ministry of Tourism and Recreation, a methodology was established. This methodology includes the mass distribution of injury data collection forms through the ten member association offices, development clinics specifically the Hockey Trainers Certification Program. Reporting periods are from September 1<sup>st</sup> to May 1<sup>st</sup>, with all reports being tabulated at the HDCO office.

All completed forms are date entered using a specific data entry screen developed in Microsoft Access and Excel database applications. Reports are available online at [www.hdco.on.ca](http://www.hdco.on.ca)

INJURY DATA COLLECTION PROGRAM

2002-2003

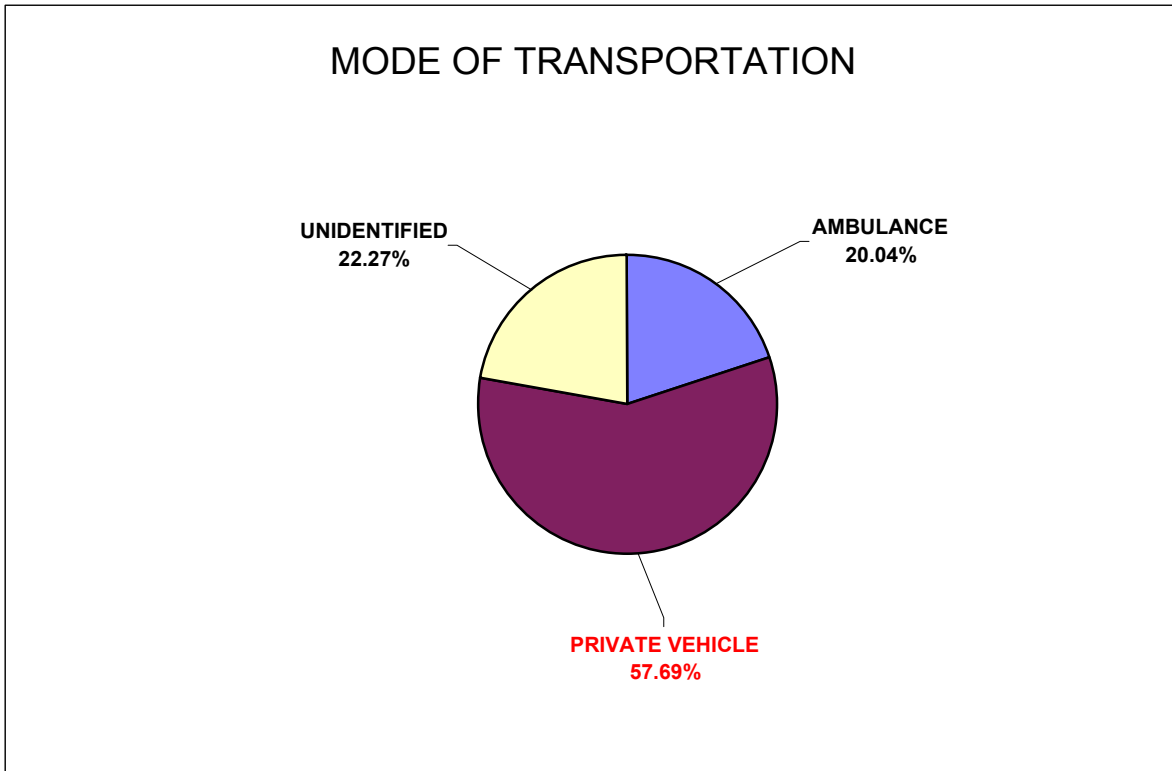
CATEGORY	NUMBER	PERCENTAGE
<b>Age Group</b>		
NOVICE	45	2.62%
ATOM	223	12.99%
PEEWEE	375	21.84%
BANTAM	519	30.23%
MIDGET	475	27.66%
JUVENILE	29	1.69%
JUNIOR	2	0.12%
INTERMEDIATE	1	0.06%
SENIOR	8	0.47%
UNIDENTIFIED	40	2.33%
TOTAL	1717	



INJURY DATA COLLECTION PROGRAM

2002-2003

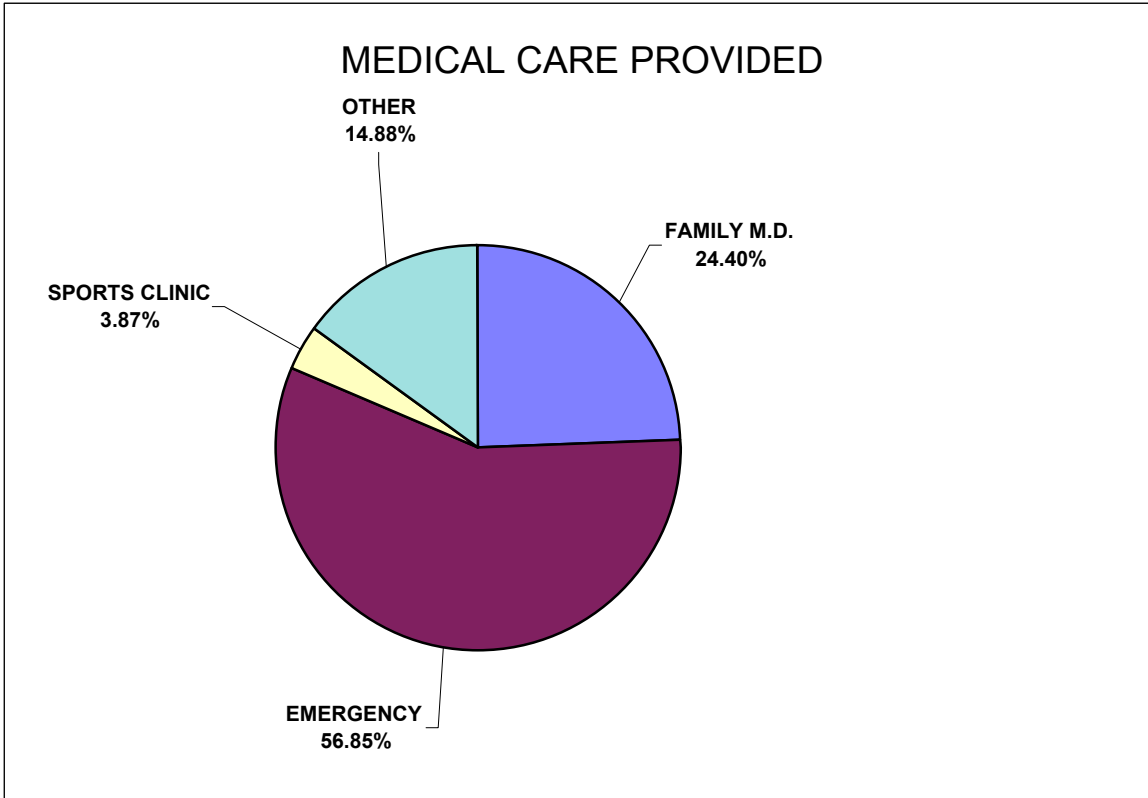
<b>CATEGORY</b>	<b>NUMBER</b>	<b>PERCENTAGE</b>
TRANSPORTED TO HOSPITAL	1437	
<b><u>Mode of Transportation</u></b>		
AMBULANCE	288	20.04%
PRIVATE VEHICLE	829	57.69%
UNIDENTIFIED	320	22.27%
TOTAL	1437	



INJURY DATA COLLECTION PROGRAM

2002-2003

CATEGORY	NUMBER	PERCENTAGE
<b><u>Medical Care Provided</u></b>		
FAMILY M.D.	82	24.40%
EMERGENCY	191	56.85%
SPORTS CLINIC	13	3.87%
OTHER	50	14.88%
TOTAL	336	



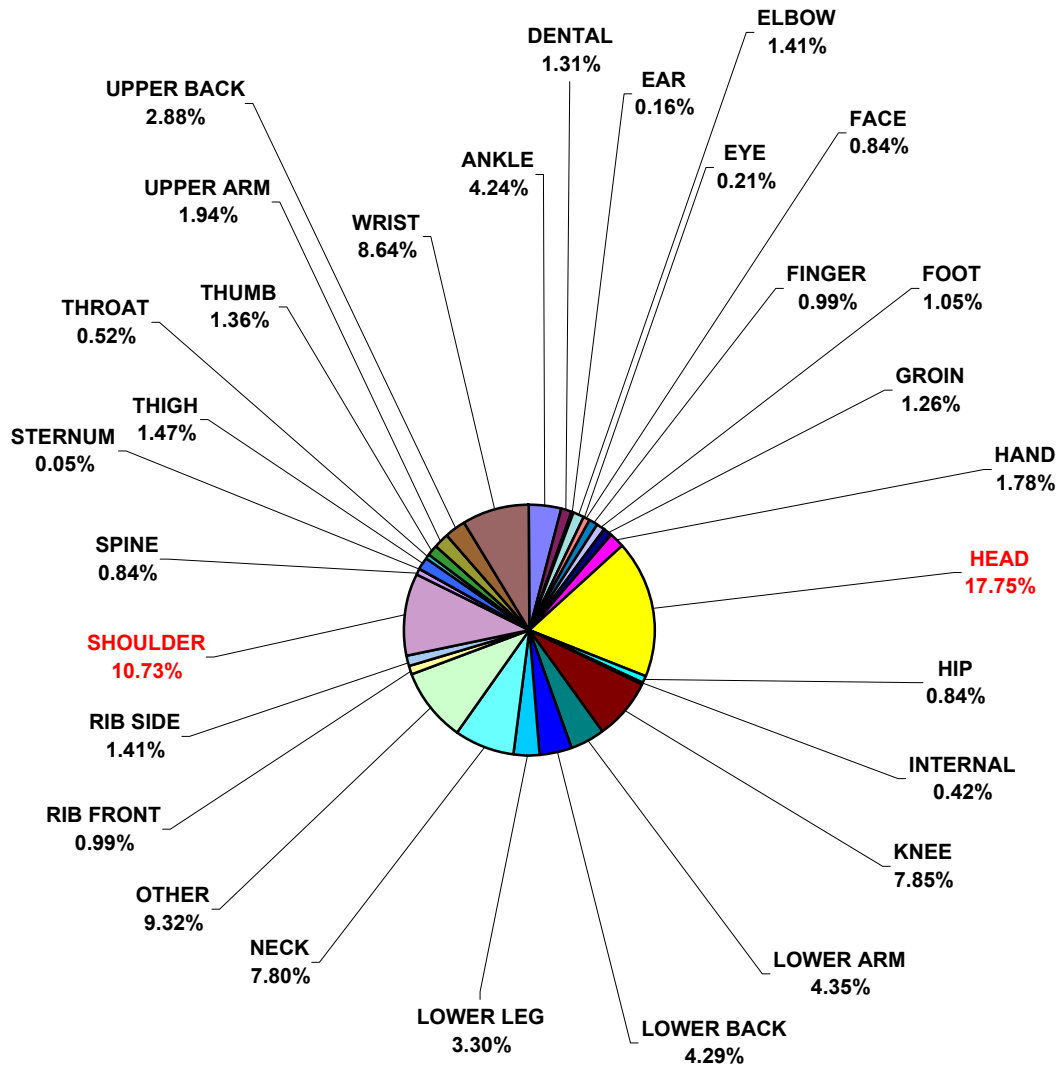
INJURY DATA COLLECTION PROGRAM

2002-2003

<b>CATEGORY</b>	<b>NUMBER</b>	<b>PERCENTAGE</b>
<b><u>Location of Injury</u></b>		
ANKLE	81	4.24%
DENTAL	25	1.31%
EAR	3	0.16%
ELBOW	27	1.41%
EYE	4	0.21%
FACE	16	0.84%
FINGER	19	0.99%
FOOT	20	1.05%
GROIN	24	1.26%
HAND	34	1.78%
HEAD	339	17.75%
HIP	16	0.84%
INTERNAL	8	0.42%
KNEE	150	7.85%
LOWER ARM	83	4.35%
LOWER BACK	82	4.29%
LOWER LEG	63	3.30%
NECK	149	7.80%
OTHER	178	9.32%
RIB FRONT	19	0.99%
RIB SIDE	27	1.41%
SHOULDER	205	10.73%
SPINE	16	0.84%
STERNUM	1	0.61%
THIGH	28	1.47%
THROAT	10	0.52%
THUMB	26	1.36%
UPPER ARM	37	1.94%
UPPER BACK	55	2.88%
WRIST	165	8.64%
TOTAL	1910	

2002-2003

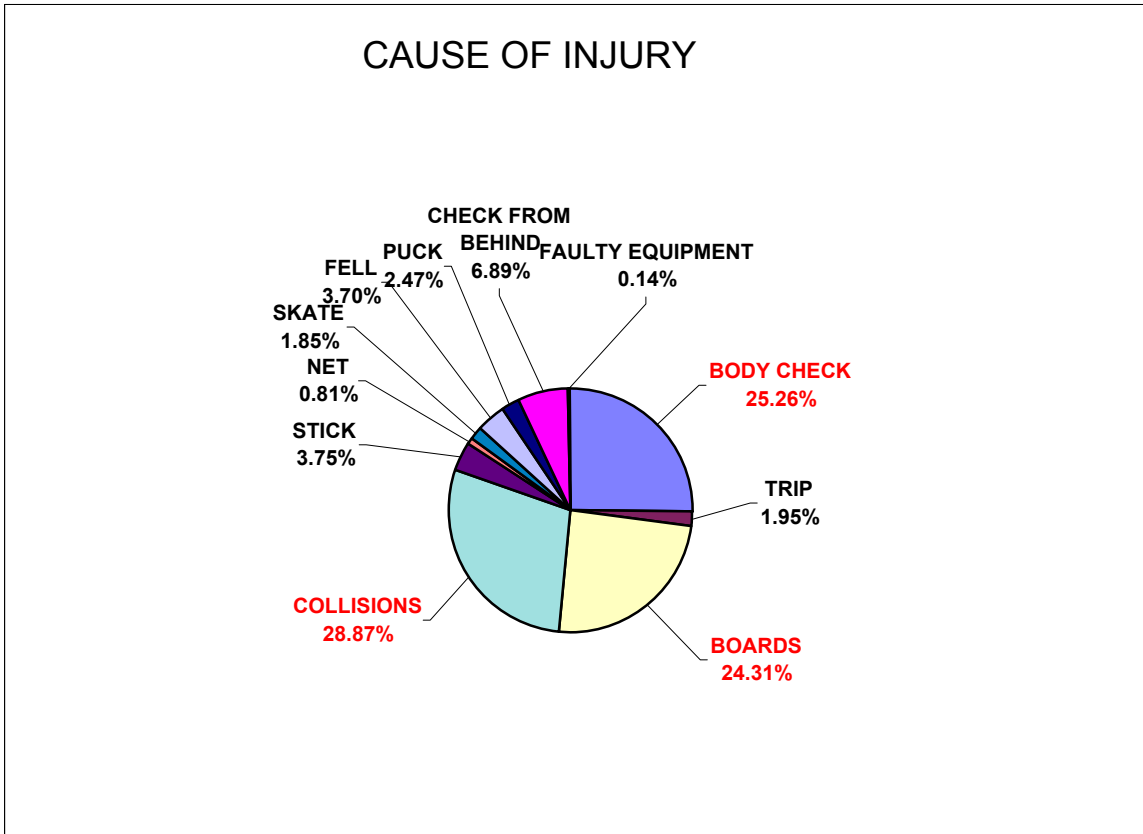
# LOCATION OF INJURY



# INJURY DATA COLLECTION PROGRAM

2002-2003

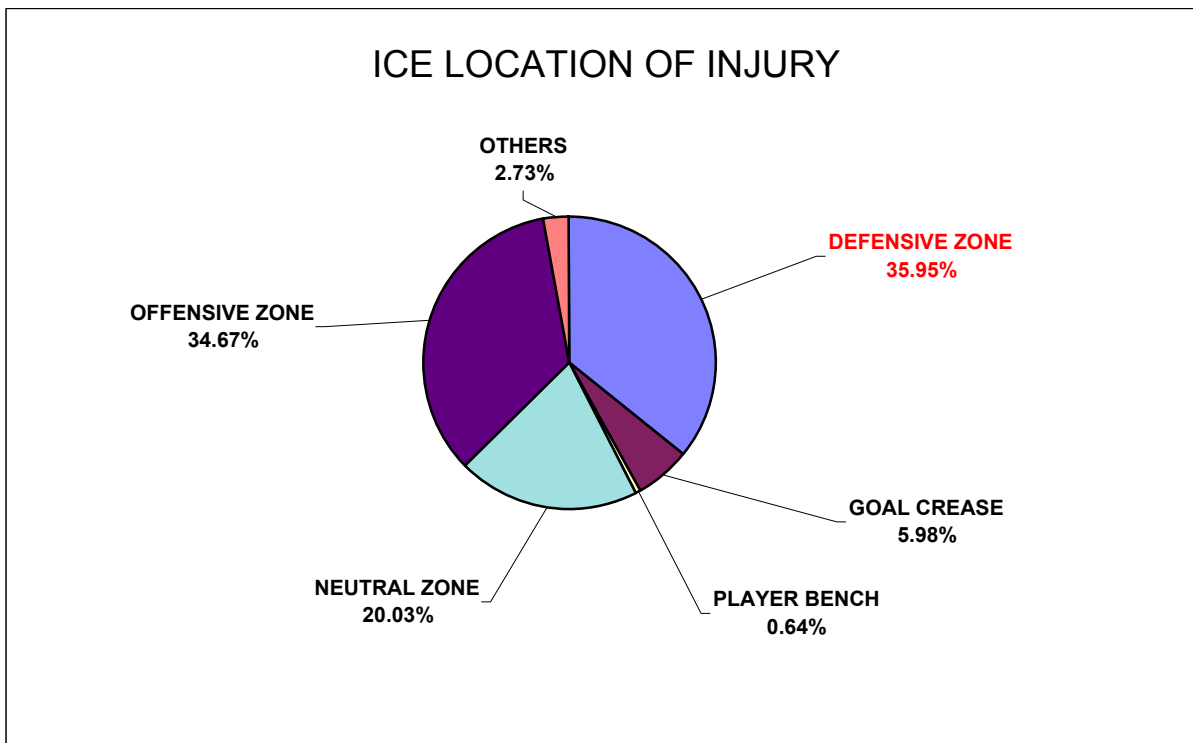
CATEGORY	NUMBER	PERCENTAGE
<u>Cause of Injury</u>		
BODY CHECK	532	25.26%
TRIP	41	1.95%
BOARDS	512	24.31%
COLLISIONS	608	28.87%
STICK	79	3.75%
NET	17	0.81%
SKATE	39	1.85%
FELL	78	3.70%
PUCK	52	2.47%
CHECK FROM BEHIND	145	6.89%
FAULTY EQUIPMENT	3	0.14%
TOTAL	2106	



# INJURY DATA COLLECTION PROGRAM

2002-2003

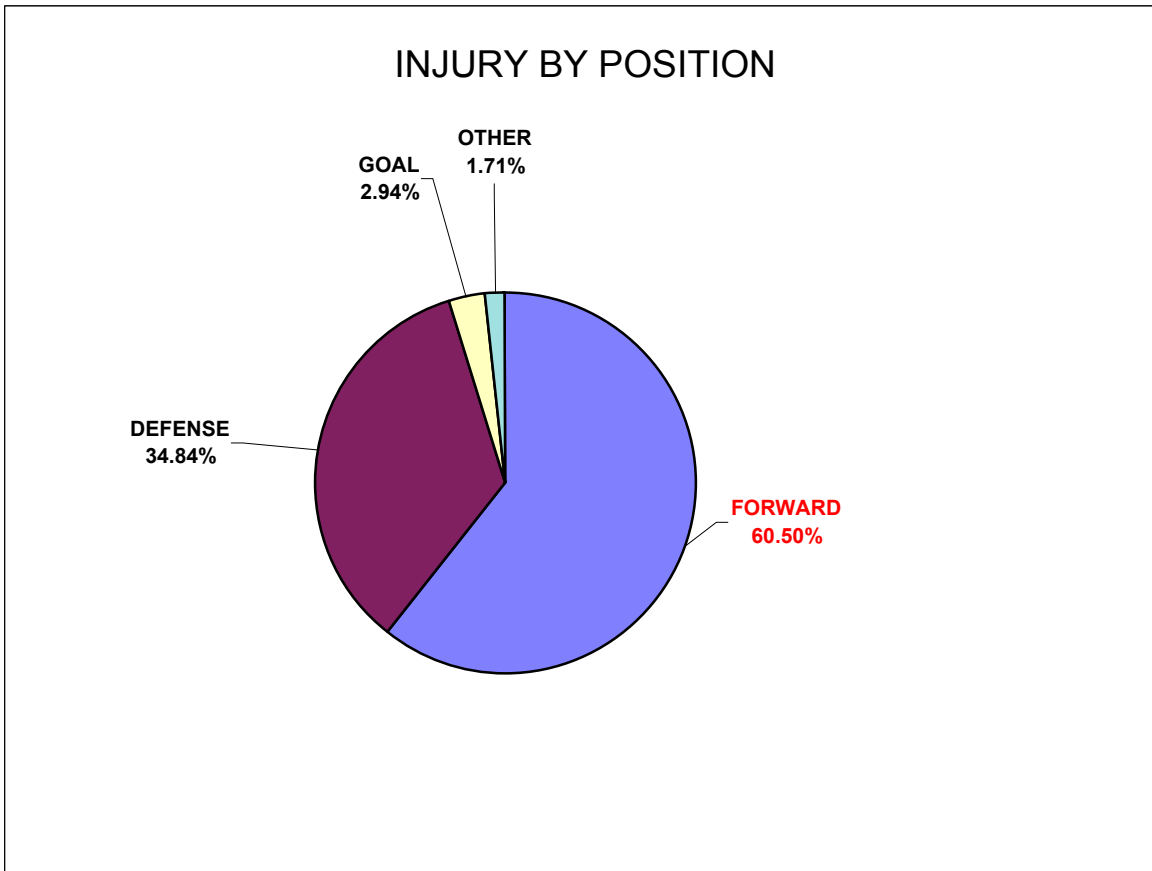
CATEGORY	NUMBER	PERCENTAGE
<b><u>Ice Location of Injury</u></b>		
DEFENSIVE ZONE	619	35.95%
GOAL CREASE	103	5.98%
PLAYER BENCH	11	0.64%
NEUTRAL ZONE	345	20.03%
OFFENSIVE ZONE	597	34.67%
OTHERS	47	2.73%
TOTAL	1722	



INJURY DATA COLLECTION PROGRAM

2002-2003

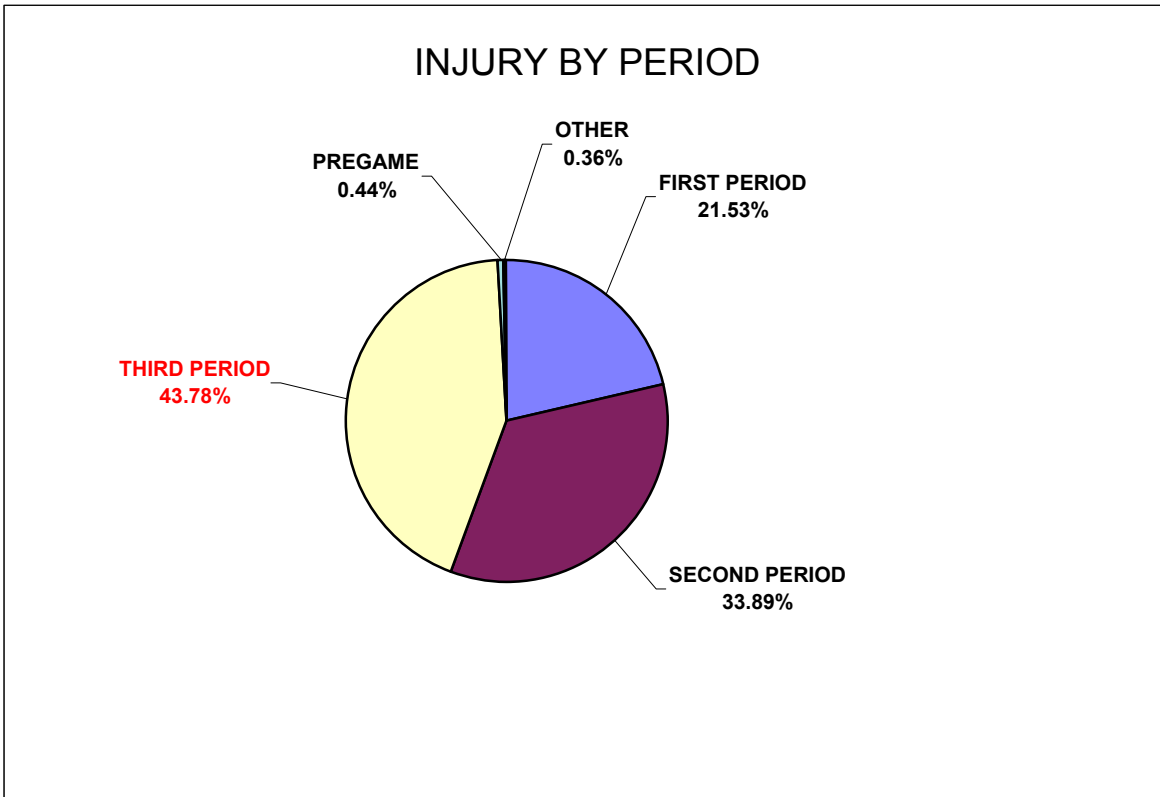
CATEGORY	NUMBER	PERCENTAGE
<b><u>Injury by Position</u></b>		
FORWARD	988	60.50%
DEFENSE	569	34.84%
GOAL	48	2.94%
OTHER	28	1.71%
TOTAL	1633	



INJURY DATA COLLECTION PROGRAM

2002-2003

CATEGORY	NUMBER	PERCENTAGE
<b><u>Injury by Period</u></b>		
FIRST PERIOD	296	21.53%
SECOND PERIOD	466	33.89%
THIRD PERIOD	602	43.78%
PREGAME	6	0.44%
OTHER	5	0.36%
TOTAL	1375	



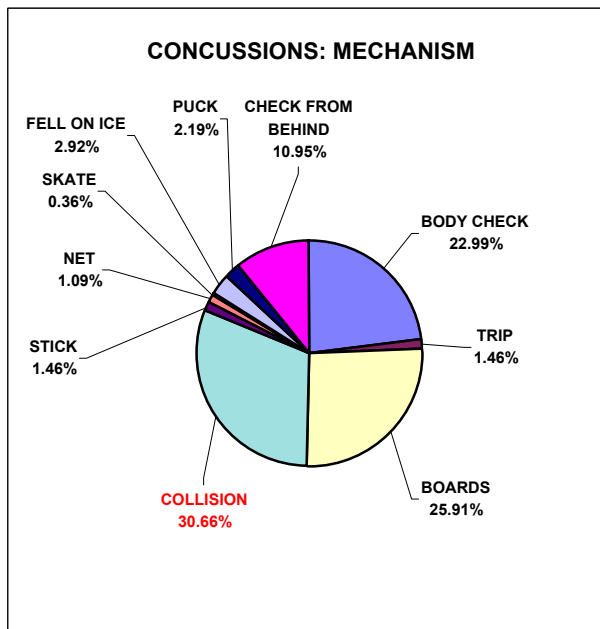
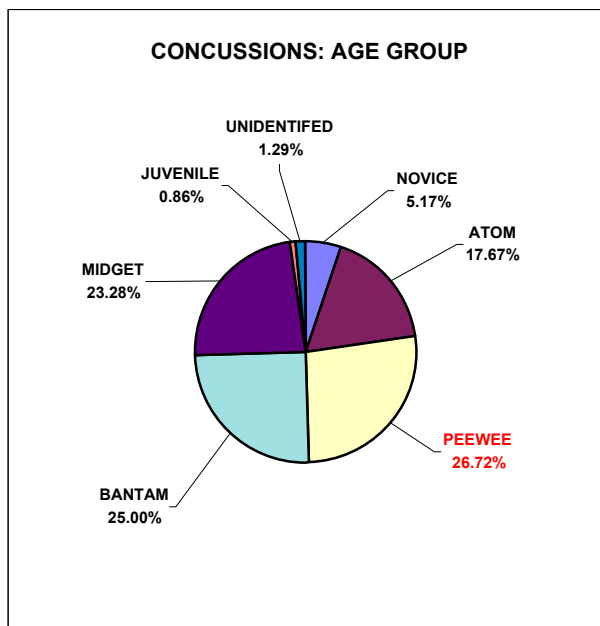
INJURY DATA COLLECTION PROGRAM

2002-2003

**CATEGORY                      NUMBER                      PERCENTAGE**

**Concussion by Age Group**

NOVICE	12	5.17%
ATOM	41	17.67%
PEEWEE	62	26.72%
BANTAM	58	25.00%
MIDGET	54	23.28%
JUVENILE	2	0.86%
UNIDENTIFIED	3	1.29%
	232	



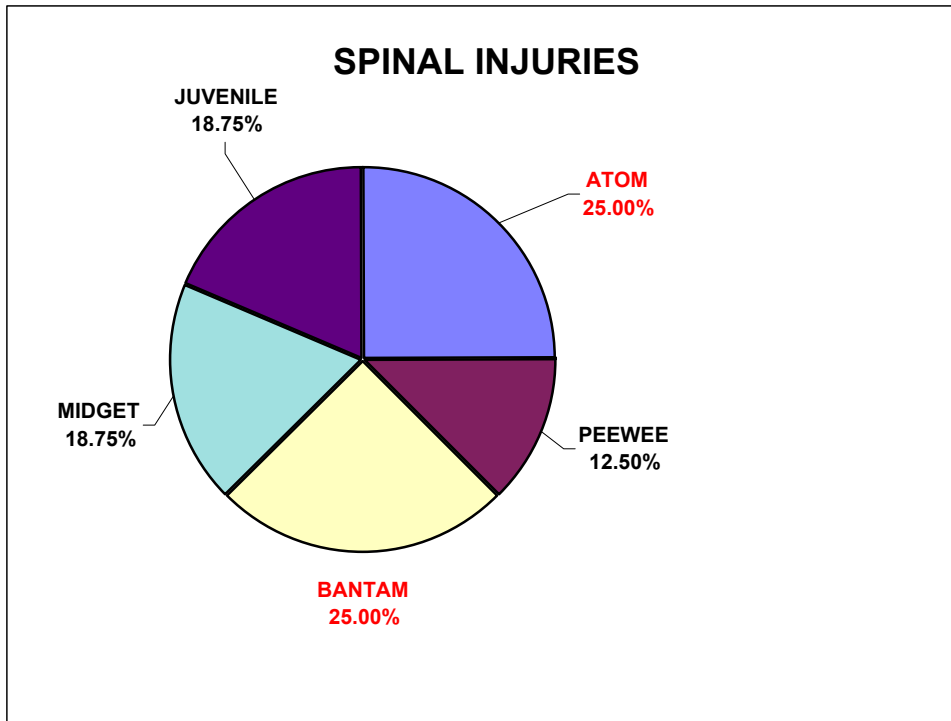
**Mechanism of Injury**

BODY CHECK	63	22.99%
TRIP	4	1.46%
BOARDS	71	25.91%
COLLISION	84	30.66%
STICK	4	1.46%
NET	3	1.09%
SKATE	1	0.36%
FELL ON ICE	8	2.92%
PUCK	6	2.19%
CHECK FROM BEHIND	30	10.95%
	274	

INJURY DATA COLLECTION PROGRAM

2002-2003

CATEGORY	NUMBER	PERCENTAGE
<u>Spinal Injuries</u>		
ATOM	4	25.00%
PEEWEE	2	12.50%
BANTAM	4	25.00%
MIDGET	3	18.75%
JUVENILE	3	18.75%
TOTAL	16	



INJURY DATA COLLECTION PROGRAM  
2002-2003

**SPINAL PROFILE**

<b>16 Total Injuries Reported</b>	<b>2002-03</b>	<b>2001-02</b>	<b>(+/-)</b>
	16	7	129%

**AGE GROUP**

Atom	4	25.00%
Pee Wee	2	12.50%
Bantam	4	25.00%
Midget	3	18.75%
Juvenile	3	18.75%
TOTAL	16	

**POSITION PLAYED**

Forward	11	68.75%
Defense	5	31.25%
TOTAL	16	

**PERIOD**

1st	4	25.00%
2nd	1	6.25%
3rd	6	37.50%
Unidentified	5	31.25%
TOTAL	16	

**OTHER RELATED INJURIES**

Head	4	30.77%
Neck	4	30.77%
Back (Lower and Upper)	5	38.46%
TOTAL	13	

**TYPE OF INJURY**

Fracture	2	22.22%	
Bruise	5	55.56%	
Other	2	22.22%	Swelling
TOTAL	9		

**SYMPTOMS**

Pain	7	87.50%
Concussion	1	12.50%
TOTAL	8	

**MECHANISM/CAUSE OF INJURY**

Bodycheck	4	23.53%
Trip	2	11.76%
Boards	6	35.29%
Fell on Ice	1	5.88%
Checking from Behind	4	23.53%
TOTAL	17	

INJURY DATA COLLECTION PROGRAM  
2002-2003

**SPINAL PROFILE**

**POSITION ON ICE**

Defensive Zone	5	35.71%
Neutral Zone	3	21.43%
Offensive Zone	6	42.86%
TOTAL	14	

**TRANSPORTED TO HOSPITAL** 11

**MODE OF TRANSPORTATION**

Ambulance	6	42.86%
Private Vehicle	5	
TOTAL	11	

**TIME LOST DUE TO INJURY** Specified

1-3 weeks	1
3+ weeks	3
1-6 days	2

**REVIEW**

Increase in number of injuries reported  
Forwards received 68.75% of this type of injury  
37.50% of injuries received in 3rd period  
35.29% of injuries caused from boards  
**23.53% of injuries caused from checking from behind**

INJURY DATA COLLECTION PROGRAM  
2002-2003

**DENTAL PROFILE**

	2002-03	2001-02	(+/-)
<b>26 Total Injuries Reported</b>	26	48	-46%

**AGE GROUP**

Novice	1	3.85%
Atom	1	3.85%
PeeWee	7	26.92%
Bantam	7	26.92%
Midget	9	34.62%
Juvenile	1	3.85%
<b>TOTAL</b>	<b>26</b>	

**POSITION PLAYED**

Forward	13	50.00%	
Defense	3	11.54%	
Goaltender	3	11.54%	
Other	7		coach, official
<b>TOTAL</b>	<b>26</b>		

**PERIOD**

1st	11	22.92%
2nd	9	18.75%
3rd	16	33.33%
Unidentified	12	25.00%
<b>TOTAL</b>	<b>48</b>	

**OTHER RELATED INJURIES**

Head	1	14.29%	
Face	2	28.57%	
Concussion	1	14.29%	
Other	3	42.86%	thumb, jaw, lip
<b>TOTAL</b>	<b>7</b>		

**TYPE OF INJURY**

Fracture	1	4.55%	
Sprain	1	4.55%	
Laceration	3	13.64%	
Other	17	77.27%	chipped, broken, loose, contusion
<b>TOTAL</b>	<b>22</b>		

**MECHANISM/CAUSE OF INJURY**

Trip	1	4.35%	
Board	2	8.70%	
Collision	4	17.39%	
Stick	6	26.09%	
Fell on Ice	1	4.35%	
Checking from Behind	2	8.70%	
Other	7	30.43%	struck by opponent, fight
<b>TOTAL</b>	<b>23</b>		

INJURY DATA COLLECTION PROGRAM  
2002-2003

**DENTAL PROFILE**

**POSITION ON ICE**

Defensive Zone	8	30.77%
Goal Crease	1	3.85%
Player Bench	1	3.85%
Neutral Zone	5	19.23%
Offensive Zone	4	15.38%
Unidentified	7	26.92%
	26	

**TRANSPORTED TO HOSPITAL**

Other	6	
	8	*on-site care

**MODE OF TRANSPORTATION**

Private Vehicle	6
-----------------	---

**REVIEW**

Decrease in injuries over previous year  
Peewee, Bantam and Midget combined for 88.46% of total  
Forwards received 13 or 50% of injuries  
Stick cited in 26% of cases reported

INJURY DATA COLLECTION PROGRAM  
2002-2003

<b>NECK PROFILE</b>	<b>2002-03</b>	<b>2001-02</b>	<b>(+/-)</b>
<b>149 Injuries Reported</b>	149	135	10%

**AGE GROUP**

Novice	3	2.01%
Atom	42	28.19%
PeeWee	43	28.86%
Bantam	33	22.15%
Midget	22	14.77%
Intermediate	1	0.67%
Unidentified	5	3.36%
<b>TOTAL</b>	<b>149</b>	

**POSITION PLAYED**

Forward	91	61.07%	
Defense	42	28.19%	
Goaltender	10	6.71%	
Unidentified	5	3.36%	
Other	1		helper
<b>TOTAL</b>	<b>149</b>		

**PERIOD**

1st	17	11.41%	
2nd	36	24.16%	
3rd	70	46.98%	
Unidentified	25	16.78%	
Other	1		Overtime
<b>TOTAL</b>	<b>149</b>		

**OTHER RELATED INJURIES**

Head	48	52.17%	
Throat	1	1.09%	
Back Upper/Lower	30	32.61%	
Face	3	3.26%	
Shoulder	7	7.61%	
Other	3		Thumb, chest
<b>TOTAL</b>	<b>92</b>		

**TYPE OF INJURY**

Strain	25	21.19%	
Sprain	34	28.81%	
Bruise	15	12.71%	
Laceration	1	0.85%	
Concussion	23	19.49%	
Others	20	16.95%	whiplash, muscle spasms, soft tissue injury, pinched nerve
<b>TOTAL</b>	<b>118</b>		

INJURY DATA COLLECTION PROGRAM  
2002-2003

**NECK PROFILE**

**SYMPTOMS**

Pain	38	76.00%	
Loss of Feeling	4	8.00%	
Shortness of Breath	1	2.00%	
Others	7	14.00%	headache, dizziness, blurred vision
TOTAL	50		soft tissue damage

**MECHANISM/CAUSE OF INJURY**

Body Check	32	16.16%	
Trip	6	3.03%	
Boards	38	19.19%	
Collision	42	21.21%	
Stick	11	5.56%	
Net	1	0.51%	
Skate	1	0.51%	
Fell	4	2.02%	
Check from Behind	41	20.71%	
Poor Fit	2	1.01%	
Other	20	10.10%	high stick, struck by opponent,
TOTAL	198		slashing,

**POSITION ON ICE**

Defensive Zone	51	34.23%
Goal Crease	11	7.38%
Player Bench	1	0.67%
Neutral Zone	23	15.44%
Offensive Zone	48	32.21%
Not Identified	15	10.07%
TOTAL	149	

**TRANSPORTED TO HOSPITAL** 110

**MODE OF TRANSPORTATION**

Ambulance	82	65.60%
Private Vehicle	31	24.80%
On site care	12	9.60%
TOTAL	125	

**REVIEW**

Forwards received 61.07% of this type of injury  
 The defensive zone was the site of 34.23% of injuries  
 70 or 46.98% occurred in the 3rd period  
 Atom, PeeWee and Bantam age group combined for 76.30% of injuries  
 Head injuries represented 52.17 % of related injuries  
 Collisions highest mechanism of injury - 21.29%



INJURY DATA COLLECTION PROGRAM  
2002-2003

**HEAD PROFILE**

**SYMPTOMS**

Pain	81	63.28%	
Light Bleeding	3	2.34%	
Loss of Feeling	3	42.86%	
Shortness of Breath	2	1.56%	
Heavy Bleeding	3	2.34%	
Other	36	28.13%	*disoriented, confusion
TOTAL	128		headache, blurred vision, dizziness

**MECHANISM/CAUSE OF INJURY**

Trip	8	2.66%
Board	97	32.23%
Collision	109	36.21%
Net	4	1.33%
Stick	9	2.99%
Skate	2	0.66%
Fell on Ice	16	5.32%
Puck	10	3.32%
Checking from Behind	44	14.62%
Poor Fit	2	0.66%
TOTAL	301	

**POSITION ON ICE**

Defensive Zone	132	38.94%
Goal Crease	16	4.72%
Players Bench	3	0.88%
Neutral Zone	53	15.63%
Offensive Zone	106	31.27%
Unidentified	26	7.67%
Other	3	0.88%
TOTAL	339	

**TRANSPORTED TO HOSPITAL**                      204                      60.18%

**MODE OF TRANSPORTATION**

Ambulance	64	30.77%
Private Vehicle	144	69.23%
TOTAL	208	

**REVIEW**

Slight decrease in number of injuries from previous year  
 PeeWee, Bantam, Midget age players represented 73.74% of injuries  
 Forwards were most injured 57.82%  
 Concussions\* were recorded as a related injury in 218 of 339 reports filed (64.3%)  
 \*suspected and/or clinically diagnosed

## Injury by Level

LEVEL	Ear	Head	Throat	Ribs Side	Ribs Front	Hip	Ankle	Elbow	Lower Back	Internal	Finger	Face	Spine	Sternum	Thigh	Foot	Eye	Other
M.NOVICE	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOVICE	0	16	0	1	1	0	0	1	1	0	0	0	0	0	0	0	1	1
M.ATOM	0	14	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	1
ATOM	0	50	1	1	2	2	7	2	16	0	5	1	3	0	1	3	0	17
M.PEEWEE	1	7	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
PEEWEE	0	87	1	4	1	2	19	4	22	3	1	0	2	0	5	3	1	26
M.BANTAM	0	5	0	1	1	0	1	0	6	0	0	0	2	0	2	1	0	2
BANTAM	0	78	5	11	6	8	22	8	20	4	4	5	2	0	8	8	0	55
M.MIDGET	0	4	1	0	0	0	2	2	1	0	0	0	0	0	0	1	0	4
MIDGET	2	69	2	3	4	4	25	8	8	1	8	8	3	1	7	4	2	59
JUNIOR	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUVENILE	0	3	0	2	1	0	3	0	1	0	0	0	3	0	2	0	0	3
INTERMED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SENIOR	0	1	0	1	0	0	0	1	2	0	0	0	0	0	2	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNIDENTIF	0	4	0	1	3	0	2	1	2	0	1	2	0	0	1	0	0	6
<b>TOTALS</b>	<b>3</b>	<b>308</b>	<b>10</b>	<b>26</b>	<b>18</b>	<b>16</b>	<b>81</b>	<b>26</b>	<b>79</b>	<b>8</b>	<b>19</b>	<b>16</b>	<b>15</b>	<b>1</b>	<b>28</b>	<b>20</b>	<b>3</b>	<b>172</b>

## Injury by Level

LEVEL	Dental	Neck	Groin	Lower Leg	Lower Arm	Upper Arm	Wrist	Upper Back	Knee	Shoulder
M.NOVICE	0	0	0	0	0	0	0	0	0	0
NOVICE	1	3	0	4	2	2	1	0	7	2
M.ATOM	0	4	2	2	1	0	2	1	1	0
ATOM	1	38	2	6	9	6	22	12	16	13
M.PEEWEE	0	3	0	0	1	1	2	0	1	4
PEEWEE	7	40	6	8	18	5	39	18	23	30
M.BANTAM	0	3	2	2	2	1	1	0	2	4
BANTAM	7	30	2	19	26	13	50	15	30	69
M.MIDGET	1	0	1	0	1	1	3	0	0	3
MIDGET	8	22	7	15	16	7	40	6	64	70
JUNIOR	0	0	0	0	1	0	0	0	0	0
JUVENILE	1	0	0	1	2	0	3	0	5	3
INTERMED	0	1	0	0	0	0	0	0	0	0
SENIOR	0	0	1	0	0	0	1	0	0	1
OTHER	0	0	0	1	0	1	0	0	0	0
UNIDENTIF	0	5	1	5	4	0	1	3	1	2
<b>TOTALS</b>	<b>25</b>	<b>142</b>	<b>22</b>	<b>57</b>	<b>80</b>	<b>35</b>	<b>162</b>	<b>54</b>	<b>142</b>	<b>199</b>

### Injury: Age Category

