

INJURY DATA COLLECTION PROGRAM

2001-2002

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



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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.
- 1,658 injury forms received during 2001-02 reporting period

Ontario Registration Figures for 2001-2002

Registered Players 297,270

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:

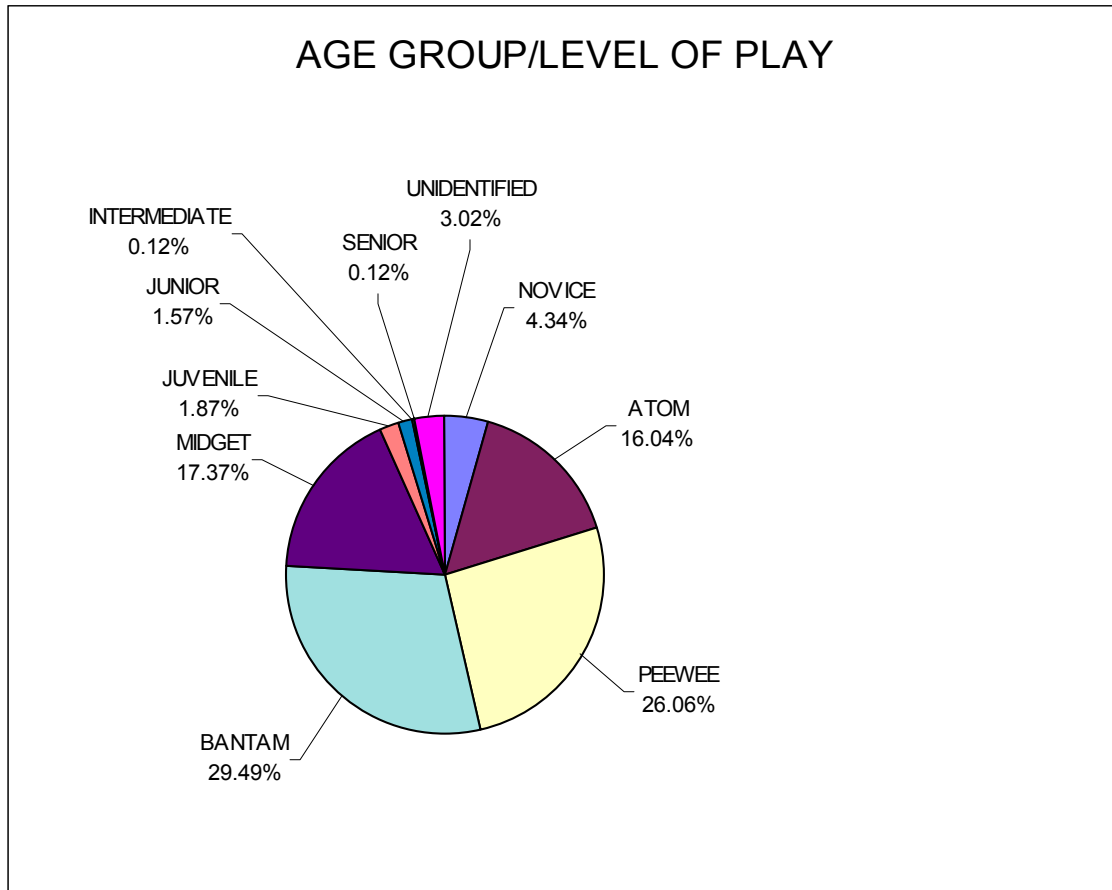
- The IDCP is administered on a yearly basis.
- Involvement is province-wide, including all minor hockey associations.
- Yearly reports are produced, which are meaningful and comprehensive for the grassroots hockey association and volunteers.
- The IDCP will assist in verifying other hockey-related studies.

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 1st to May 1st, 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

CATEGORY	NUMBER	PERCENTAGE
Age Group		
NOVICE	72	4.34%
ATOM	266	16.04%
PEEWEE	432	26.06%
BANTAM	489	29.49%
MIDGET	288	17.37%
JUVENILE	31	1.87%
JUNIOR	26	1.57%
INTERMEDIATE	2	0.12%
SENIOR	2	0.12%
UNIDENTIFIED	50	3.02%
TOTAL	1658	

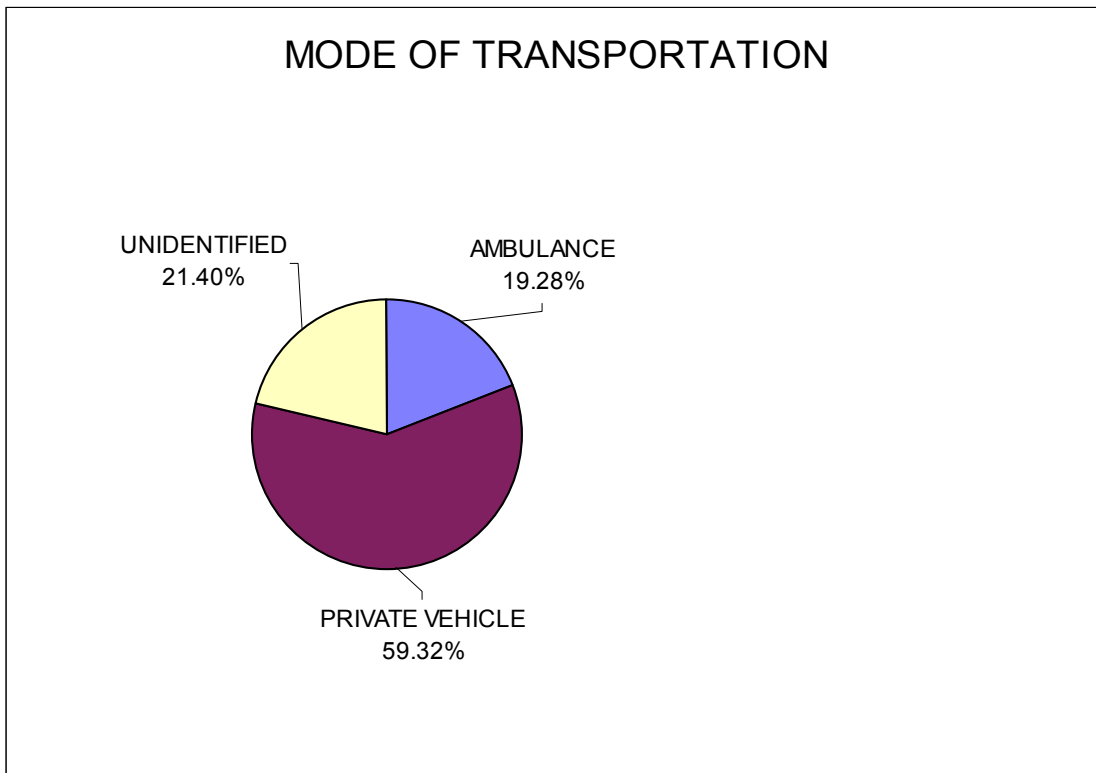


CATEGORY **NUMBER** **PERCENTAGE**

TRANSPORTED TO
HOSPITAL 1416

Mode of Transportation

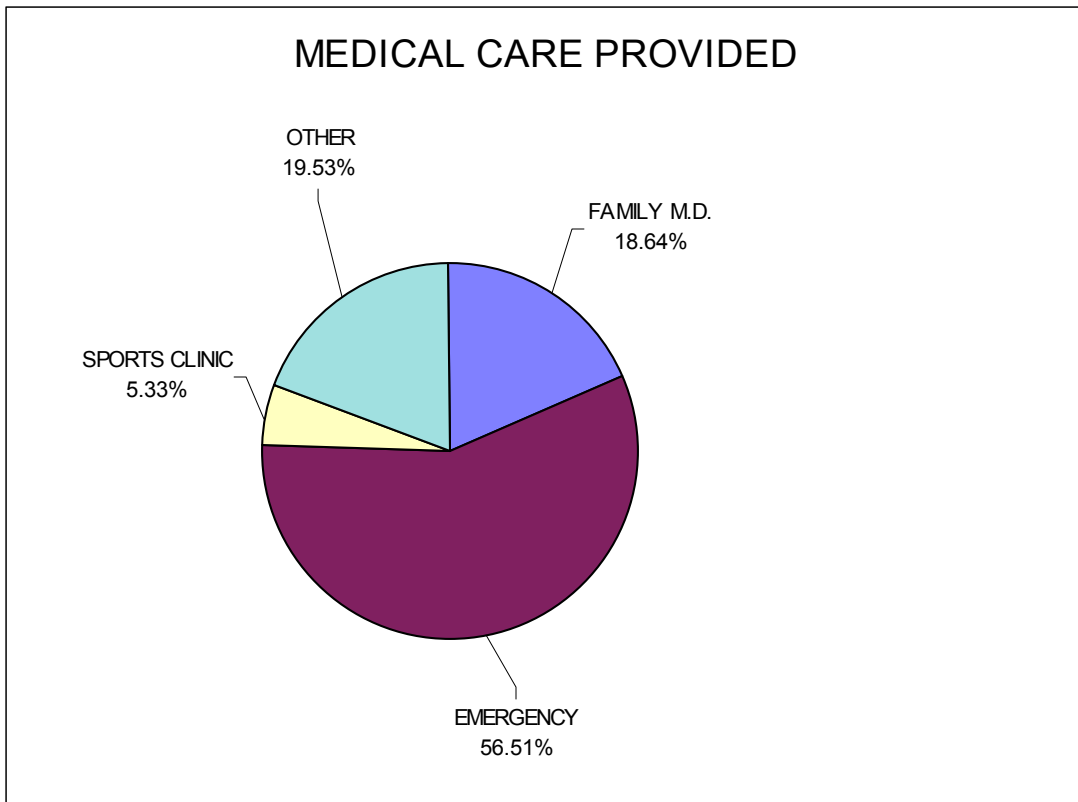
AMBULANCE	273	19.28%
PRIVATE VEHICLE	840	59.32%
UNIDENTIFIED	303	21.40%
TOTAL	1416	



CATEGORY **NUMBER** **PERCENTAGE**

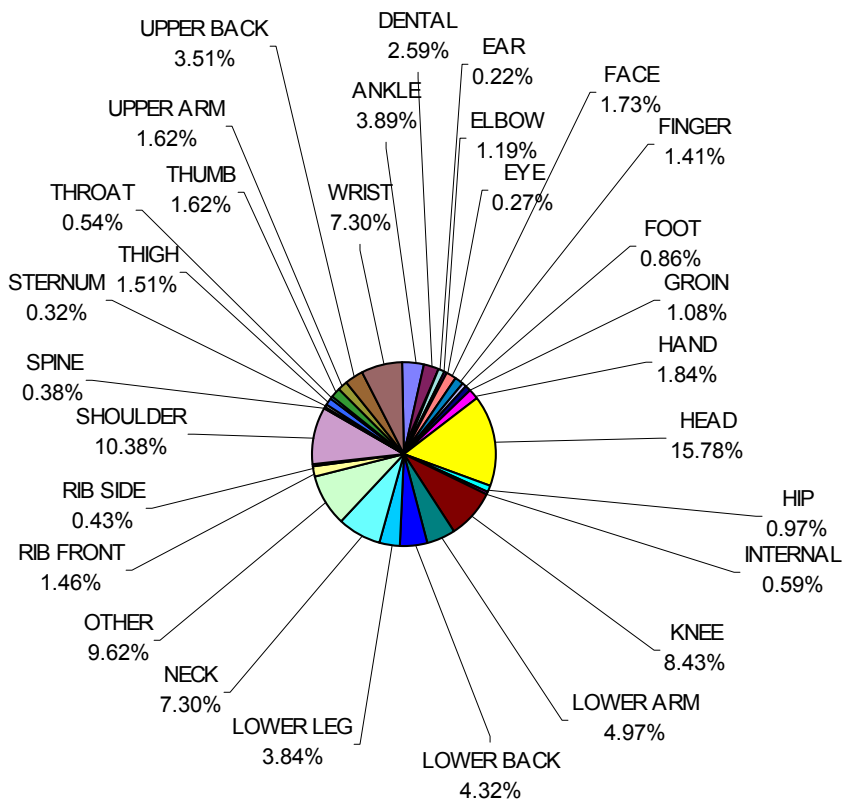
Medical Care Provided

FAMILY M.D.	63	18.64%
EMERGENCY	191	56.51%
SPORTS CLINIC	18	5.33%
OTHER	66	19.53%
TOTAL	338	



CATEGORY	NUMBER	PERCENTAGE
<u>Location of Injury</u>		
ANKLE	72	3.89%
DENTAL	48	2.59%
EAR	4	0.22%
ELBOW	22	1.19%
EYE	5	0.27%
FACE	32	1.73%
FINGER	26	1.41%
FOOT	16	0.86%
GROIN	20	1.08%
HAND	34	1.84%
HEAD	292	15.78%
HIP	18	0.97%
INTERNAL	11	0.59%
KNEE	156	8.43%
LOWER ARM	92	4.97%
LOWER BACK	80	4.32%
LOWER LEG	71	3.84%
NECK	135	7.30%
OTHER	178	9.62%
RIB FRONT	27	1.46%
RIB SIDE	8	0.43%
SHOULDER	192	10.38%
SPINE	7	0.38%
STERNUM	6	4.44%
THIGH	28	1.51%
THROAT	10	0.54%
THUMB	30	1.62%
UPPER ARM	30	1.62%
UPPER BACK	65	3.51%
WRIST	135	7.30%
TOTAL	1850	

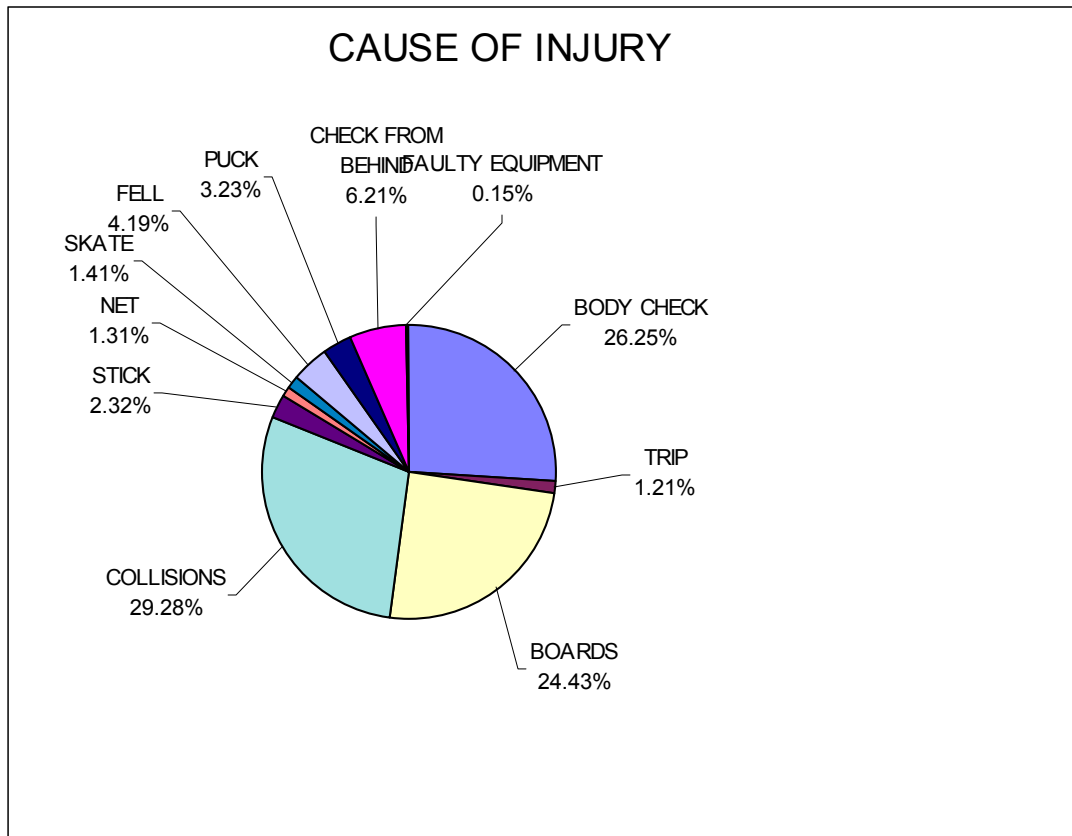
LOCATION OF INJURY



CATEGORY NUMBER PERCENTAGE

Cause of Injury

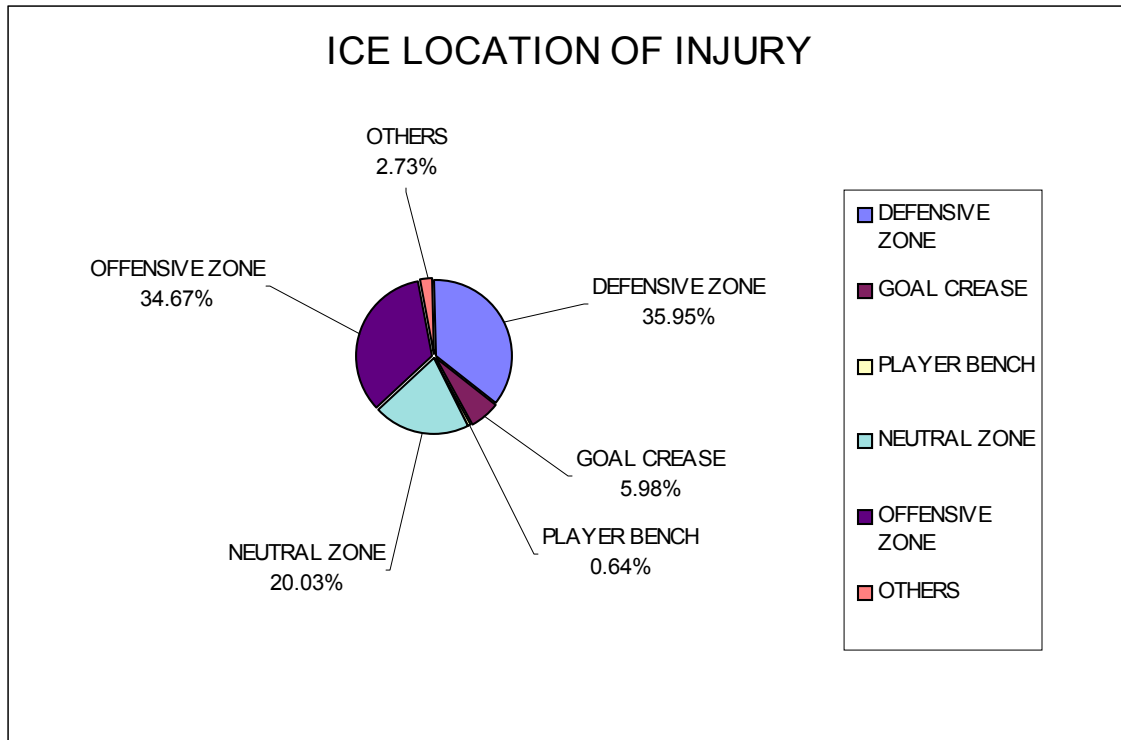
BODY CHECK	520	26.25%
TRIP	24	1.21%
BOARDS	484	24.43%
COLLISIONS	580	29.28%
STICK	46	2.32%
NET	26	1.31%
SKATE	28	1.41%
FELL	83	4.19%
PUCK	64	3.23%
CHECK FROM BEHIND	123	6.21%
FAULTY EQUIPMENT	3	0.15%
TOTAL	1981	



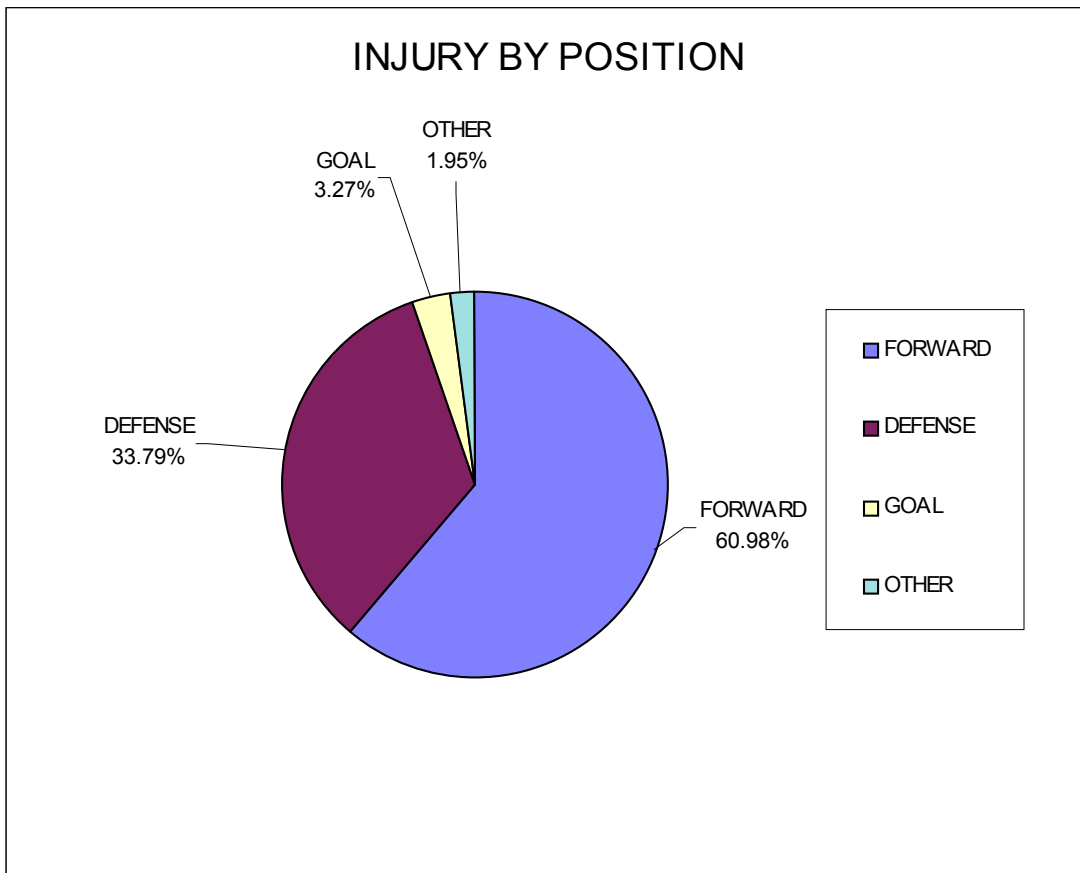
CATEGORY NUMBER PERCENTAGE

Ice Location of Injury

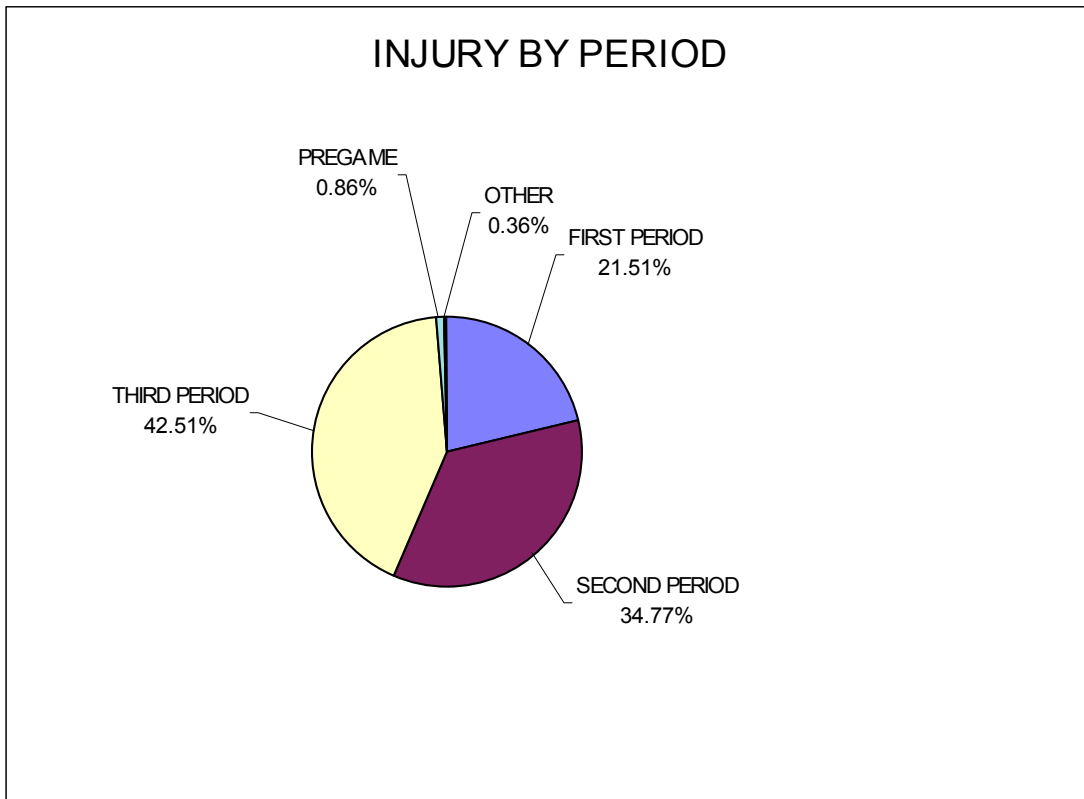
DEFENSIVE ZONE	619	35.95%
GOAL CREASE	103	5.98%
PLAYER BENCH	11	0.64%
NEUTRAL ZONE	345	20.03%
OFFENSIVE ZONE	597	34.67%
OTHERS	47	2.73%
TOTAL	1722	



CATEGORY	NUMBER	PERCENTAGE
<u>Injury by Position</u>		
FORWARD	969	60.98%
DEFENSE	537	33.79%
GOAL	52	3.27%
OTHER	31	1.95%
TOTAL	1589	



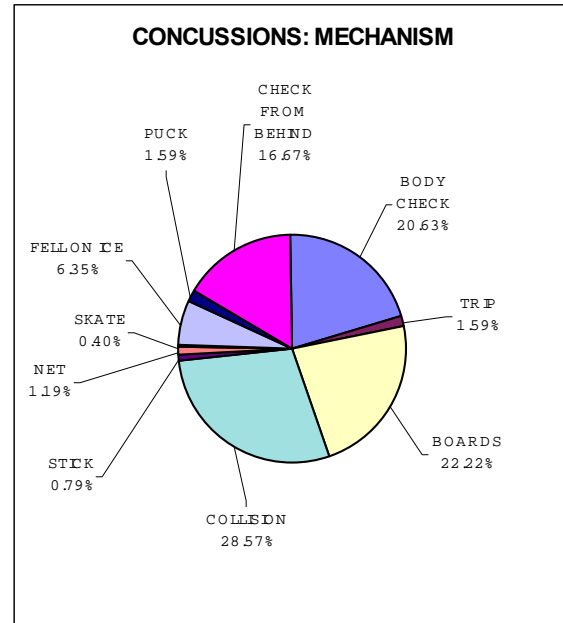
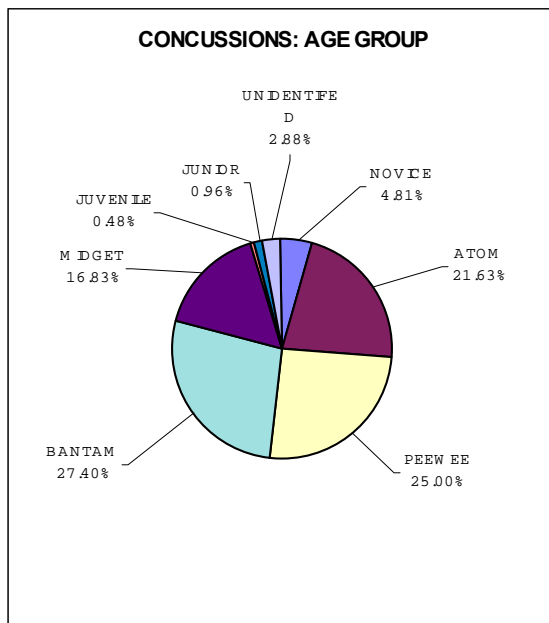
CATEGORY	NUMBER	PERCENTAGE
<u>Injury by Period</u>		
FIRST PERIOD	300	21.51%
SECOND PERIOD	485	34.77%
THIRD PERIOD	593	42.51%
PREGAME	12	0.86%
OTHER	5	0.36%
TOTAL	1395	



CATEGORY NUMBER PERCENTAGE

Concussion by Age Group

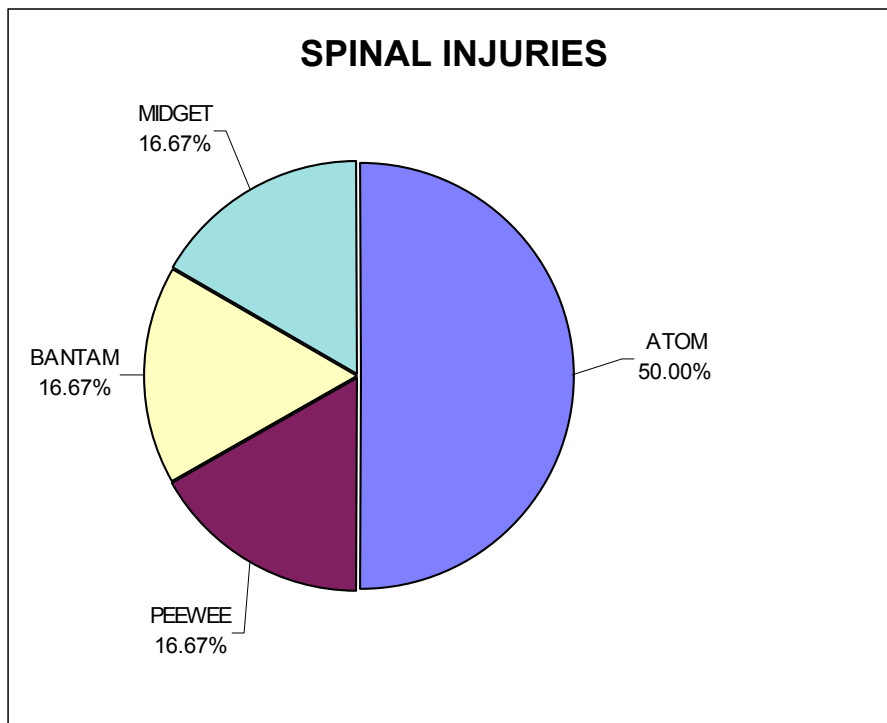
NOVICE	10	4.81%
ATOM	45	21.63%
PEEWEE	52	25.00%
BANTAM	57	27.40%
MIDGET	35	16.83%
JUVENILE	1	0.48%
JUNIOR	2	0.96%
UNIDENTIFIED	6	2.88%
	208	



Mechanism of Injury

BODY CHECK	52	20.63%
TRIP	4	1.59%
BOARDS	56	22.22%
COLLISION	72	28.57%
STICK	2	0.79%
NET	3	1.19%
SKATE	1	0.40%
FELL ON ICE	16	6.35%
PUCK	4	1.59%
CHECK FROM BEHIND	42	16.67%
	252	

CATEGORY	NUMBER	PERCENTAGE
<u>Spinal Injuries</u>		
TYKE	1	16.67%
ATOM	3	50.00%
PEEWEE	1	16.67%
BANTAM	1	16.67%
MIDGET	1	16.67%
TOTAL	6	



SPINAL PROFILE	2001-02	2000-01	(+/-)
7 Total Injuries Reported	7	11	-36%

AGE GROUP

Tyke	1	14.29%
Atom	3	42.86%
Pee Wee	1	14.29%
Bantam	1	14.29%
Midget	1	14.29%
TOTAL	7	

POSITION PLAYED

Forward	6	85.71%
Defense	1	14.29%
TOTAL	7	

PERIOD

2nd	4	57.14%
3rd	2	28.57%
Unidentified	1	14.29%
TOTAL	7	

OTHER RELATED INJURIES

Neck	3	50.00%
Upper Back	1	16.67%
Lower Back	1	16.67%
Other	1	16.67%
TOTAL	6	

TYPE OF INJURY

Bruise	1	20.00%	
Strain	1	20.00%	
Other	3	60.00%	Muscle, soft tissue
TOTAL	5		

SYMPTOMS

Pain	5	100.00%
TOTAL	5	

MECHANISM/CAUSE OF INJURY

Collision	4	50.00%
Net	1	12.50%
Fell on Ice	1	12.50%
Check from Behind	2	25.00%

TOTAL 8

POSITION ON ICE

Goal Crease	1	16.67%
Neutral Zone	1	16.67%
Offensive Zone	4	66.67%
TOTAL	6	

TRANSPORTED TO HOSPITAL 6

MODE OF TRANSPORTATION

Ambulance	6	100.00%	
Other	1	14.29%	On site care
TOTAL	7		

TIME LOST DUE TO INJURY

4 specified - 4 weeks

Previous Injury: Not specified

REVIEW

Decrease of number of injuries reported

Forwards received 85.71% of this type of injury

57.14% of injuries received in 2nd period

50% of injuries caused from an on-ice collision

DENTAL PROFILE	2001-02	2000-01	(+/-)
48 Total Injuries Reported	48	41	17%

AGE GROUP

Novice	1	2.08%
Atom	3	6.25%
PeeWee	9	18.75%
Bantam	11	22.92%
Midget	18	37.50%
Juvenile	2	4.17%
Junior	1	2.08%
Intermediate	1	2.08%
Unidentified	3	6.25%
TOTAL	48	

POSITION PLAYED

Forward	20	41.67%	
Defense	16	33.33%	
Other	8	16.67%	Official, coach
Unidentified	4		
TOTAL	48		

PERIOD

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

OTHER RELATED INJURIES

Head	1	3.33%	
Face	4	13.33%	
Neck	1	3.33%	
Concussion	1	3.33%	
Other	23	76.67%	injuries to teeth, lip, mouth, arm
TOTAL	30		

TYPE OF INJURY

Fracture	2	4.35%	
Strain	1		
Sprain	1	2.17%	
Laceration	6	13.04%	
Other	36	78.26%	chipped, lost, broken, multiple teeth
TOTAL	46		

MECHANISM/CAUSE OF INJURY

Trip	1	2.50%	
Board	3	7.50%	
Collision	16	40.00%	
Stick	4	10.00%	
Fell on Ice	1	2.50%	
Puck	3	7.50%	
Other	12	30.00%	fighting, high sticking
TOTAL	40		

POSITION ON ICE

Defensive Zone	14	29.17%
Goal Crease	2	4.17%
Neutral Zone	13	27.08%
Offensive Zone	12	25.00%
Unidentified	7	14.58%
	48	

TRANSPORTED TO HOSPITAL

Other	9		
	14		*on-site care, dentist

MODE OF TRANSPORTATION

Private Vehicle	11
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REVIEW

Increase over previous year
Peewee, Bantam and Midget combined for 79.17% of total
Forwards received 20 or 41.67% of injuries
On-ice collision cited in 40% of cases reported

NECK PROFILE**135 Injuries Reported****2001-02**

135

2000-01

137

(+/-)

-1%

AGE GROUP

Tyke	1	0.74%
Novice	10	7.41%
Atom	35	25.93%
PeeWee	33	24.44%
Bantam	35	25.93%
Midget	15	11.11%
Junior	2	1.48%
Juvenile	1	0.74%
Unidentified	3	2.22%
TOTAL	135	

POSITION PLAYED

Forward	75	55.56%	
Defense	40	29.63%	
Goaltender	11	8.15%	
Unidentified	8	5.93%	
Other	1		coach
TOTAL	135		

PERIOD

1st	14	10.37%	
2nd	24	17.78%	
3rd	76	56.30%	
Unidentified	20	14.81%	
Other	1		pre-game warm up
TOTAL	135		

OTHER RELATED INJURIES

Head	33	37.50%	
Rib Front	2	2.27%	
Back Lower/Upper	27	30.68%	
Shoulder	9		
Spine	3	3.41%	
Other	14		Nose, throat, chin, tailbone, thumb
TOTAL	88		collar bone, knee

TYPE OF INJURY

Strain	27	24.77%
Sprain	23	21.10%
Bruise	10	9.17%

Laceration	6	5.50%	
Concussion	16	14.68%	
Others	27	24.77%	whiplash, muscle spasms,
TOTAL	109		soft tissue injury, headache

SYMPTOMS

Pain	31	58.49%	
Deformity	1	1.89%	
Light Bleeding	1	1.89%	
Shortness of Breath	1	1.89%	
Others	19	35.85%	headache, numbness, swelling
TOTAL	53		dizziness, blacked out, chipped teeth

MECHANISM/CAUSE OF INJURY

Body Check	27	14.92%	
Trip	1	0.55%	
Boards	41	22.65%	
Collision	57	31.49%	
Stick	3	1.66%	
Net	2	1.10%	
Skate	1	0.55%	
Fell	3	1.66%	
Check from Behind	25	13.81%	
Puck	1	0.55%	
Other	20	11.05%	speared, cross check, lost edge,
TOTAL	181		high stick

POSITION ON ICE

Defensive Zone	42	34.71%
Goal Crease	8	6.61%
Neutral Zone	27	22.31%
Offensive Zone	44	36.36%
TOTAL	121	

TRANSPORTED TO HOSPITAL 93

MODE OF TRANSPORTATION

Ambulance	59	52.21%
Private Vehicle	32	28.32%
On site care	22	19.47%
TOTAL	113	

REVIEW

Forwards received 55.56% of this type of injury
 The offensive zone was the site of 46.36% of injuries
 56 or 40.88% occurred in the 3rd period

Atom, PeeWee and Bantam age group combined for 76.30% of injuries
 Head injuries represented 37.50 % of related injuries
 Collisions highest mechanism of injury - 31.59%

HEAD PROFILE	2001-02	2000-01	(+/_)
292 Injuries Reported	292	298	-2%
<u>AGE GROUP</u>	NUMBER	AGE %	
Novice	21	7.19%	
Atom	63	21.58%	
PeeWee	76	26.03%	
Bantam	74	25.34%	
Midget	44	15.07%	
Juvenile	3	1.03%	
Junior	3	1.03%	
Unidentified	8	2.74%	
TOTAL	292		
<u>POSITION PLAYED</u>			
Forward	169	57.88%	
Defense	95	32.53%	
Goaltender	14	4.79%	
Unidentified	12	4.11%	
Other	2	0.68%	coach
TOTAL	292		
<u>PERIOD</u>			
1st	48	16.44%	
2nd	88	30.14%	
3rd	119	40.75%	
Unidentified	37	12.67%	
TOTAL	292		
<u>OTHER RELATED INJURIES</u>			
Neck	33	13.64%	
Dental	1	0.41%	
Face	2	0.83%	
Throat	1	0.41%	
Back Lower	2	0.83%	
Rib Front/Side	4	1.65%	
Concussion	199	82.23%	
TOTAL	242		
<u>TYPE OF INJURY</u>			

Strain	6	5.56%	
Fracture	2	1.85%	
Sprain	5	4.63%	
Bruise	10	9.26%	
Laceration	14	12.96%	
Other	71	65.74%	headache, nausea, double vision
TOTAL	108		loss of consciousness

SYMPTOMS

Pain	44	42.31%	
Deformity	3	2.88%	
Light Bleeding	3	2.88%	
Heavy Bleeding	1	0.96%	
Other	53	50.96%	*disoriented, confusion
TOTAL	104		headache, blurred vision, dizziness

MECHANISM/CAUSE OF INJURY

Body Check	79	22.13%
Trip	6	1.68%
Board	79	22.13%
Collision	107	29.97%
Stick	6	1.68%
Net	8	2.24%
Skate	1	0.28%
Fell on Ice	20	5.60%
Puck	4	1.12%
Body Check	47	13.17%
TOTAL	357	

POSITION ON ICE

Defensive Zone	89	32.72%
Goal Crease	20	7.35%
Players Bench	2	0.74%
Neutral Zone	49	18.01%
Offensive Zone	105	38.60%
Other	7	2.57%
TOTAL	272	

TRANSPORTED TO HOSPITAL 162 59.56%

MODE OF TRANSPORTATION

Ambulance	55	33.95%
Private Vehicle	107	66.05%
TOTAL	162	

REVIEW

Slight decrease in number of injuries from previous year
Atom, PeeWee, and Bantam age players represented 72.95% of injuries
Forwards were most injured 57.88%
Concussions* were recorded as a related injury in 199 reports filed (68%)
*suspected and/or clinically diagnosed