

# Munster GAA Club Forum 2025

ACL Injury and its impact on the GAA

# Setting The Scene



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Today's aim

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Problem

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Solution

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How to get there

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Challenges

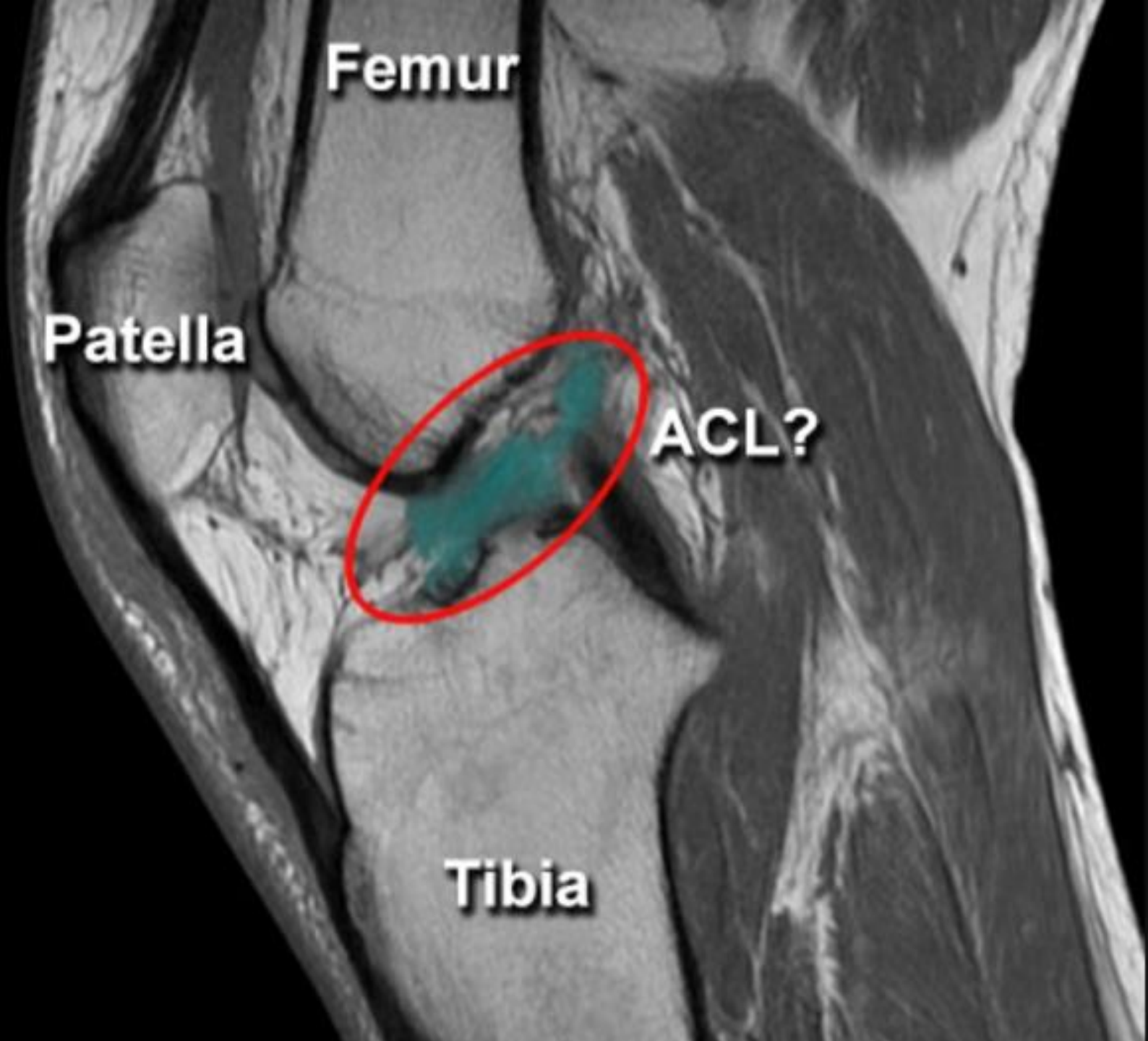
# Aim & Outcome

Outline different sides ACL story

A project I want to be a part of... in whatever way !



So  
What's The  
Problem ?



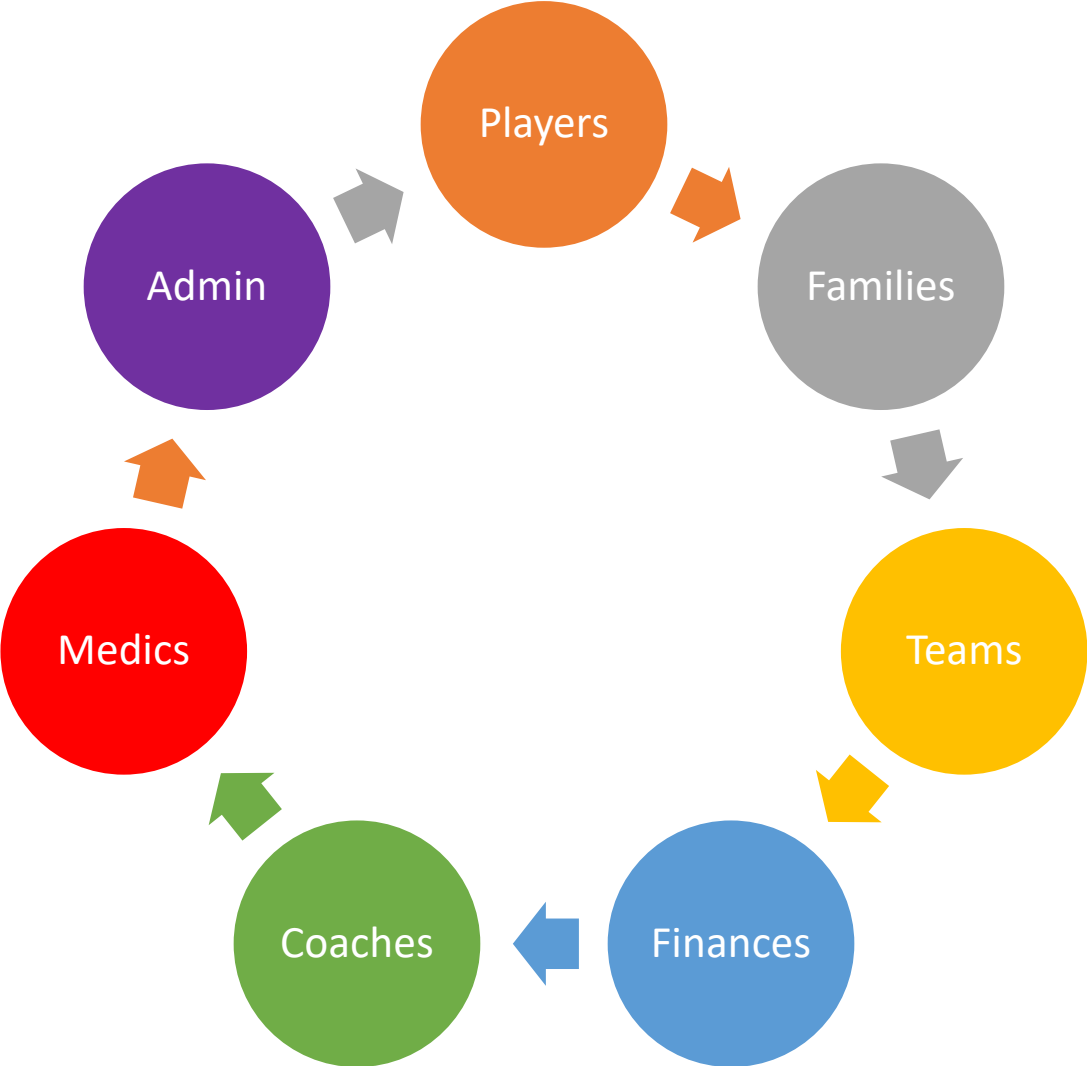
# The Problem

Player  
Welfare



Financial

# Who Is Affected ?



# Injury Claims – Intercounty 2017 -23



Injury Type	Football	Hurling	Total
Knee	819	389	<b>1208</b>
Thigh	672	256	<b>928</b>
Ankle	506	249	<b>755</b>
Leg / Foot	427	206	<b>633</b>
Arm / Hand / Wrist / Finger	293	233	<b>526</b>
Shoulder	256	134	<b>390</b>
Facial / Teeth / Nose / Head	238	124	<b>362</b>
Back / Abdominal	197	117	<b>314</b>
Hip	155	56	<b>211</b>

# Injury Database 2008-16 ACL Gaelic Games (Roe '17)



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“Previously” not inter-county issue (1.7% elite male football, 1.6% Hurling)

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Most occur match-play (F:67% & H:93%)

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Match v Training incidence (8-times > football, 24-times > hurling)

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Mean time loss ~10 months

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Conclusion: Low Incidence-High Impact, Prevention better than cure



## Knee pain and function in retired male intercounty GAA players: an exploratory study

Sean Carmody<sup>1</sup>  · Ronan Kearney<sup>2,3</sup> · Chantelle Doran<sup>4</sup> · Gurneet Brar<sup>5</sup> · Vincent Goutteborge<sup>1,6,7,8</sup>

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Incidence of knee surgery, TKR, Medication usage

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54% players didn't return to previous performance levels

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21% players retired due to knee injury

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53% physical health impacted due to knee injury

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KOOS lower than general population and amateur soccer players, but higher retired professional soccer players with established OA

# Injury Fund 2017-2020 (Horgan, Weir, McHugh)



## Overall

- Total costs €22.1 million

## Costs

- 79% spend incurred medical treatment €17.46m

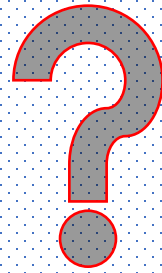
## Knees

- Knees 54% / €12.1m

# Data Gap

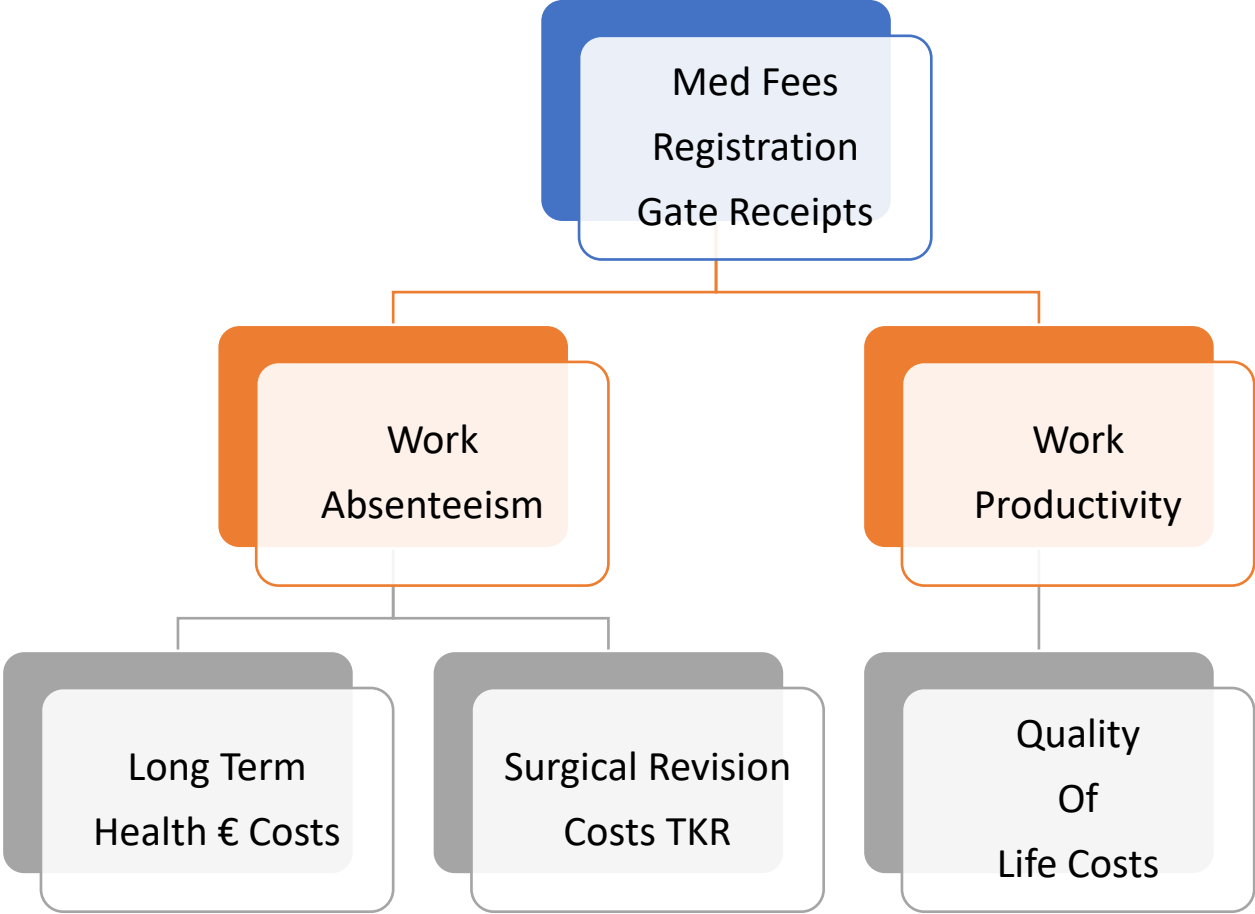


~ €4m Injury Fund  
Absorbed



4 Regional  
Dispersed Hospitals  
much greater  
surgery figure

# Financial Impacts



## Other Sports

### Financial burden of anterior cruciate ligament reconstructions in football (soccer) players: an Australian cost of injury study

Andrew George Ross ,<sup>1</sup> Blaise Agresta,<sup>2</sup> Marnee McKay,<sup>3</sup> Evangelos Pap

- Australia highest rate ACLR & TKR in world
- ACL inflation ↑ 127% over 2007-20
- Low Incidence, High Impact
- **Direct** = surgery + rehab
- **Indirect Costs** = loss of earnings, knee OA, TKR, OA medications, access to health services etc
- **Total cost Aus\$ 69.6m**
- Mean costs \$A34,079

**Table 1** Base cost assumptions for the model

Parameters	Value used*	Range for sensitivity analysis (95% CI or $\pm 20\%$ )		Source
		Low	High	
<b>ACL costs</b>				
Surgery (including revision)	8690	7524	9730	IHPA <sup>21</sup>
Direct costs including rehabilitation	1939	1720	2158	Ross <i>et al</i> <sup>23</sup>
Knee MRI cost	409.65 (119.94)†	Fixed cost	Fixed cost	MBS <sup>59</sup> , DHAC <sup>60</sup>
Indirect costs (loss of income)	11 899	9688	14 110	Ross <i>et al</i> <sup>23</sup>
Presenteeism paid work	2371	-20%	+20%	Eggerding <i>et al</i> <sup>17</sup>
Unpaid work (eg, Household tasks)	2200	-20%	+20%	Eggerding <i>et al</i> <sup>17</sup>
<b>Knee OA costs</b>				
Direct healthcare costs				
Annual cost of prescribed medications	246.91	-20%	+20%	PBS <sup>30</sup> , Chemist war
GP cost per visit	39.75 (30.76)†	Fixed cost	Fixed cost	MBS <sup>59</sup> , DHAC <sup>60</sup>
Number of GP visits	4.2	-20%	+20%	Schellevis <i>et al</i> <sup>33</sup>
Physio cost per visit	56 (55.81)†	Fixed cost	Fixed cost	MBS <sup>59</sup> , DHAC <sup>60</sup>
Number of Physio visits	3	-20%	+20%	APA <sup>22</sup>
Orthopaedic surgeon cost per visit	75.05 (102.13)†	Fixed cost	Fixed cost	MBS <sup>59</sup> , DHAC <sup>60</sup>
Knee X-ray cost	51.40	Fixed cost	Fixed cost	MBS <sup>59</sup>
Intra-articular corticosteroid injection	115.35	Fixed cost	Fixed cost	MBS <sup>59</sup>
Other direct non-medical expenditures	191.66	-20%	+20%	Lapsley <i>et al</i> <sup>25</sup>
Indirect costs (loss of income)	7304.05	74.03	13 918.58	Salmon <i>et al</i> <sup>26</sup>
<b>TKR costs</b>				
Surgery	23 522	18 491	31 466	IHPA <sup>21</sup>
Revision	34 755	29 773	41 808	IHPA <sup>21</sup>
Rehabilitation	750.36	-20%	+20%	APA <sup>22</sup>

Long-term quality of life, work limitation, physical activity, economic cost and disease burden following ACL and meniscal injury: a systematic review and meta-analysis for the OPTIKNEE consensus

Stephanie Rose Filbay <sup>1</sup> Søren T Skou <sup>2,3</sup> Garrett S Bullock,<sup>4</sup>

50 studies out of  
2932

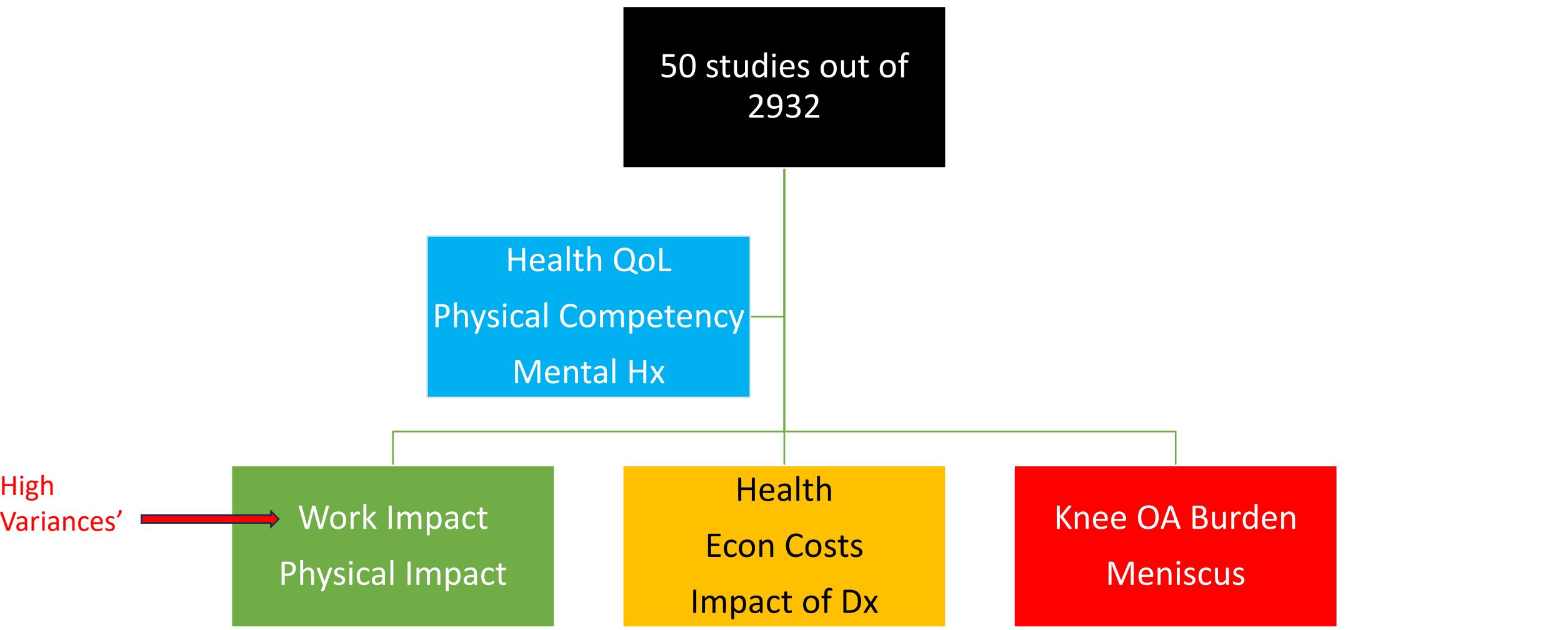
Health QoL  
Physical Competency  
Mental Hx

Work Impact  
Physical Impact

Health  
Econ Costs  
Impact of Dx

Knee OA Burden  
Meniscus

High  
Variances' 



# Work Absenteeism & Productivity

Von Essen number sick days taken ACLR

Acute ACLR < sick leave ↓ indirect costs to individual / society as  
↓ time off work

Eggerding cost early ACLR versus rehab & ? later ACLR

Early ACLR not cost-effective compared to rehab +/- reconstruction,  
consistent with Filbay

Since 2007 ↑ 130% ACLR in NL = Health + socio-economic burdens

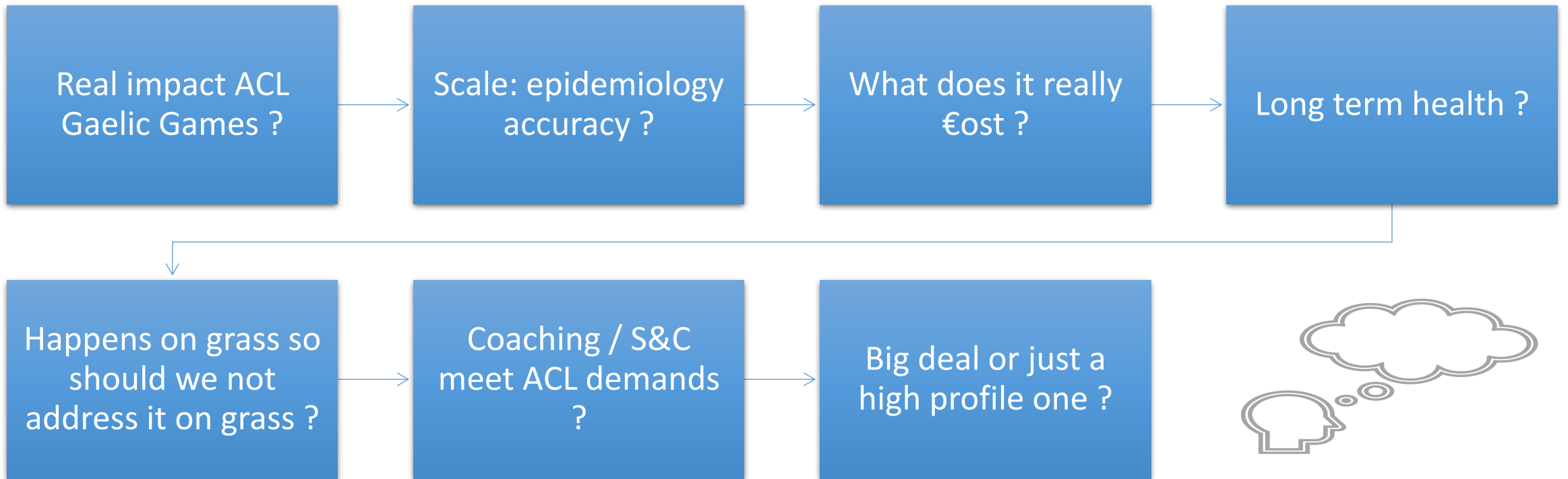


# ACL Financial Impact O'Connor '23



- 9-year financial analysis LGFA injury fund
- Claim rates consistent over 9 years, injury inflation increased by 70%
- Knee injuries 25% all claims and 80% all hospitalizations
- ACL injuries 1/12 claims, 47% injury fund + 66% hospital related costs
- Claims adult > youths
- **Conclusion:** Long-term analysis id injury trends, promote wider stakeholder engagement risk reduction strategies

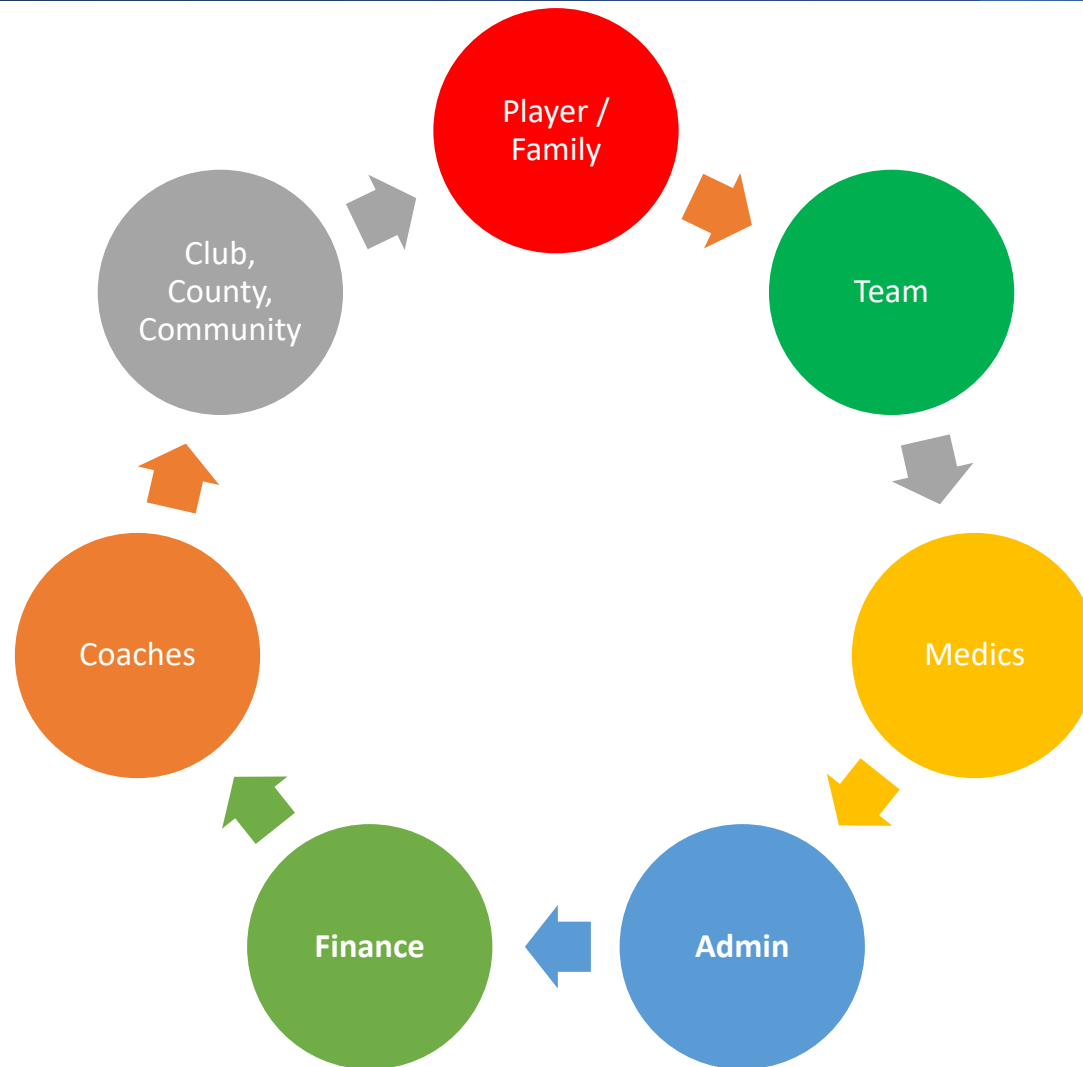
# Questions



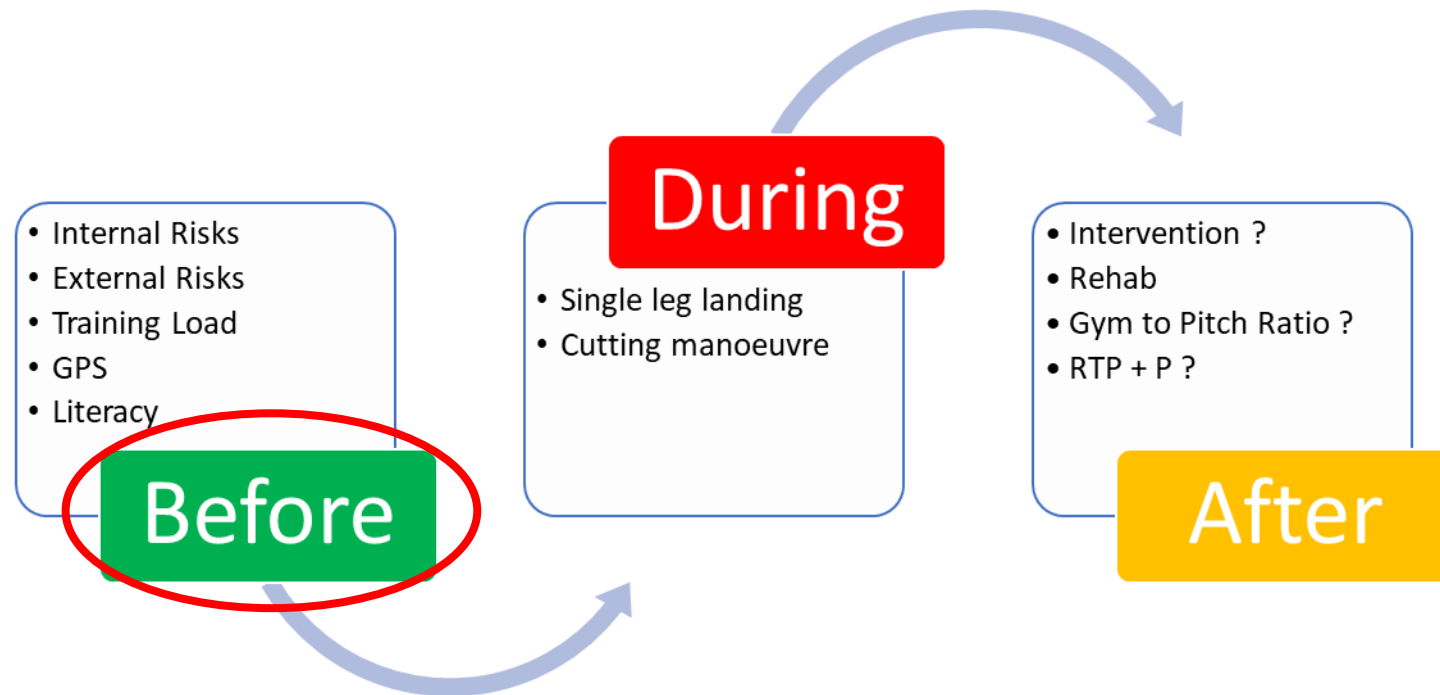
# Stakeholders



# Who is affected ?



# What Happens ?



# The Before Moment





“I dummy soloed and as soon as my foot hit the ground, my whole knee **just exploded**. I knew straight away.”

Ciaran Byrne Louth GAA



“Last few minutes keeper kicked the ball out, jumped & **landed**, it **just collapsed**”

Thought it was my left knee that I did a few years back but quickly realised the right knee was in trouble”

**Cathal Doherty, Cill Chomain CLG**



"I remember just my knee popping out of place and I was on the ground.

I wasn't sure what it was, but I knew from the pain and kind of what happened, that was the end of the All-Ireland final for me"

Vikki Falconer





# The Solution

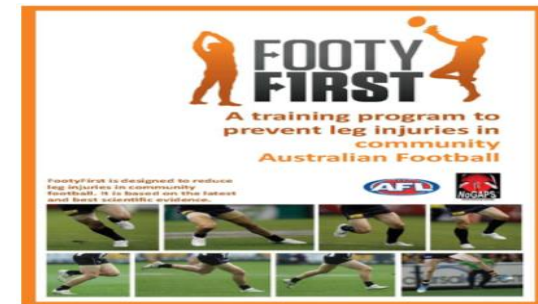


# What Does The Customer Want / Need ?



## Four distinct patterns of anterior cruciate ligament injury in women's professional football (soccer): a systematic video analysis of 37 match injuries

Leonard Achenbach ,<sup>1</sup> Hendrik Bloch,<sup>2</sup> Christian Klein ,<sup>2</sup> Theresa Damm,<sup>3</sup> Matthias Obinger,<sup>4</sup> Maximilian Rudert,<sup>1</sup> Werner Krutsch,<sup>5,6</sup> Dominik Szymiski<sup>5</sup>



## The effect of translational and rotational traction on lower extremity joint loading

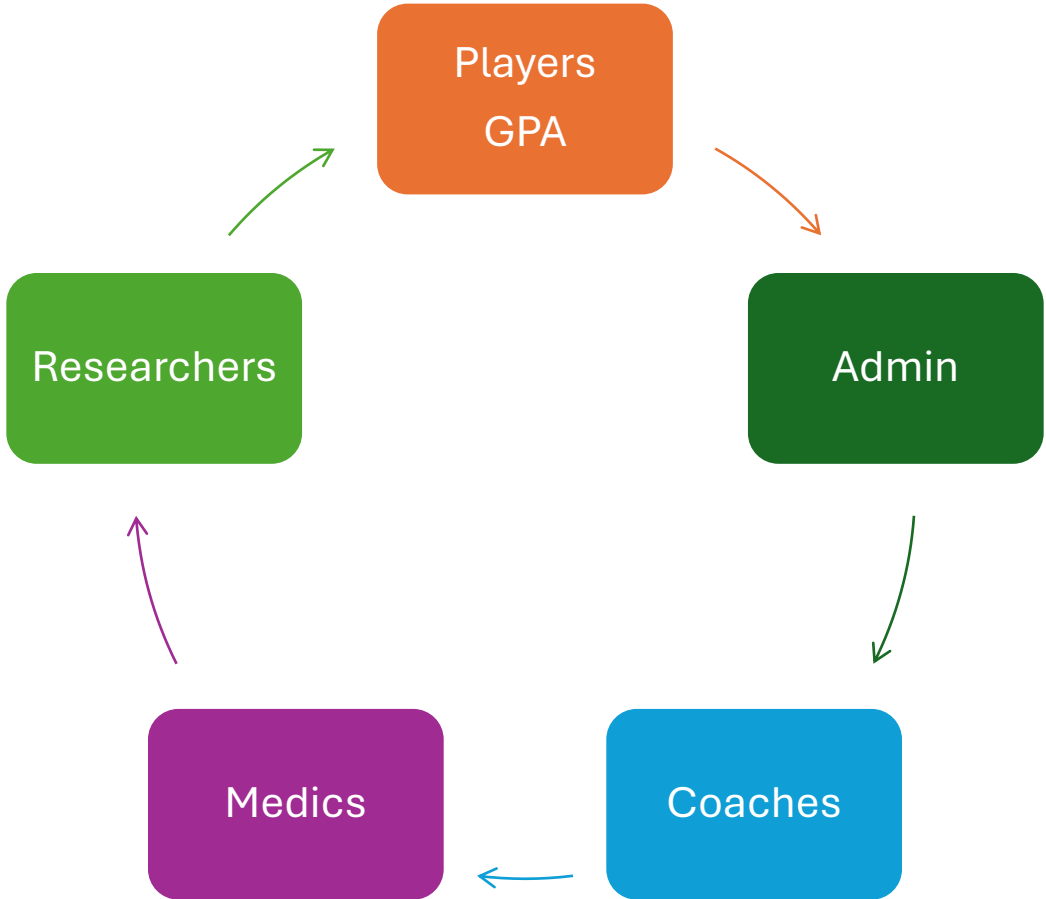
John W. Wannop and Darren J. Stefanyshyn

## Scale ACL Registry (Maletis 2017)

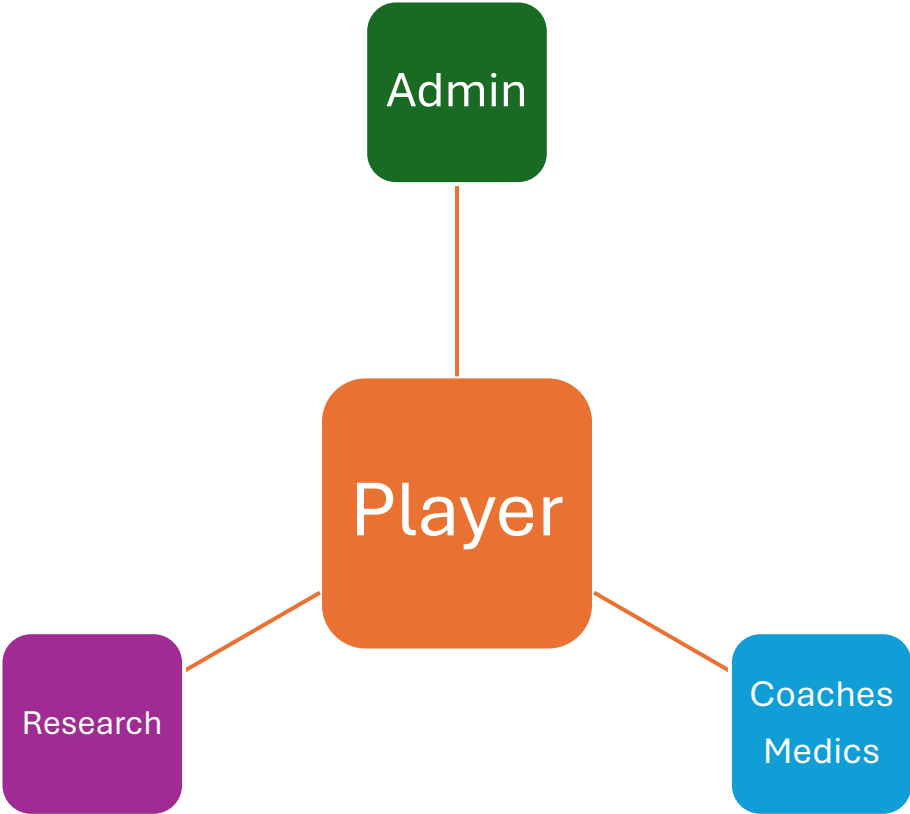


	Yr Started	Volume	Mean Age	Male	Female
Norway	2004	19380	27	57%	43%
Sweden	2005	32,466	28	58%	42%
Denmark	2005	25,354	30	60%	40%
Kaiser Permanente	2005	30,398	29	63%	37%
United Kingdom	2012	6105	29	74%	26%
Luxembourg	2011	349	29	70%	30%

# Stakeholders




# The customer ?



## What others have done

Financial burden of anterior cruciate ligament reconstructions in football (soccer) players: an Australian cost of injury study

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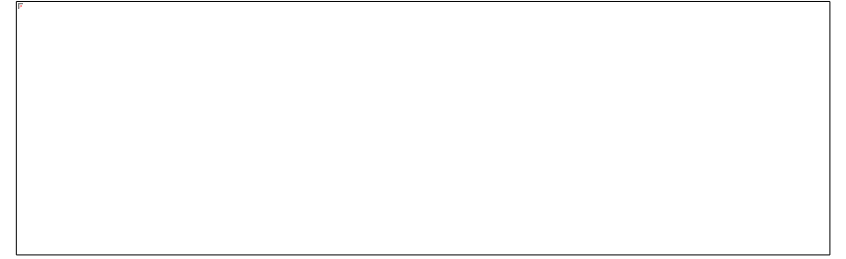
- Potential cost savings using injury prevention programme
- 50% ↓ male ACL & 64% ↓ non-contact female ACL (Webster 2018, Taylor 2015)
- **102 less surgeries is \$A 9.4m saving per annum**
- **Conclusion:** With ↑ ACL incidence prudent injury prevention investment strategies needed

# Challenges





# Challenges



Scale: Data Deficit



Scale: how best to get a picture of what's really happening ?



Foireann Culture



Intervention: Get right message @ right time to right stakeholder

# Conclusion



# Final Thoughts

ACL Injuries Occur On Field

Player Welfare & Financial Costs

Are we are trying to fix an on-field problem with off field solutions?