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HEALTH LIBRARY IRELAND EVIDENCE  
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Health Library Ireland  
Leabharlann Sláinte na hÉireann  
EVIDENCE

## THE ECOSYSTEM OF EVIDENCE

Lessons learned in the pandemic  
era and future challenges

10<sup>th</sup> International Conference for EBHC Teachers and Developers  
10<sup>th</sup> Conference of the International Society for EBHC  
Taormina, 25<sup>th</sup> - 28<sup>th</sup> October 2023

#EBHC2023

# Impact of health library information resources on patient care

# Background: What is Health Library Ireland?

**80,000** healthcare personnel.

**Health Library Ireland** established **2017** as consolidated national service. Previously series of hospital-based or regionally aligned health library services. First strategic plan **2018-2023**.

National eLibrary [www.hselibrary.ie](http://www.hselibrary.ie) supplying **ejournals**, ebooks, **point-of-care resources** (BMJ Best Practice, UpToDate), **drugs reference resources** (MedicinesComplete).

27 (mainly hospital-based) physical library sites with teams delivering national procurement and nationally standardized services ... incl. **Health Library Ireland Evidence: protocol-guided literature searches** and **evidence summaries**.

Current membership **15,000** healthcare personnel.



# Objectives and Methods: A cross-sectional survey of Irish HCP

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**Objectives:** How do Irish HCP use information found in or provided by **Health Library Ireland**? What is the **impact on patient care?** incl. impact on **quality of care provided** ... and associated **economic** impact?

**Design:** Multi-centre cross-sectional survey. **27 library sites.** Local (mainly acute hospital) **email distribution lists.**

**Setting:** Primary, secondary, and tertiary healthcare settings in Irish public health service.

**Methods:** **9-item email questionnaire** to **registered library users**, and via broadcast email to **local email distribution lists.** Separately, consulted economic data sources to find credible estimates of the costs associated with **adverse events** and **clinicians' time** in Irish health service.

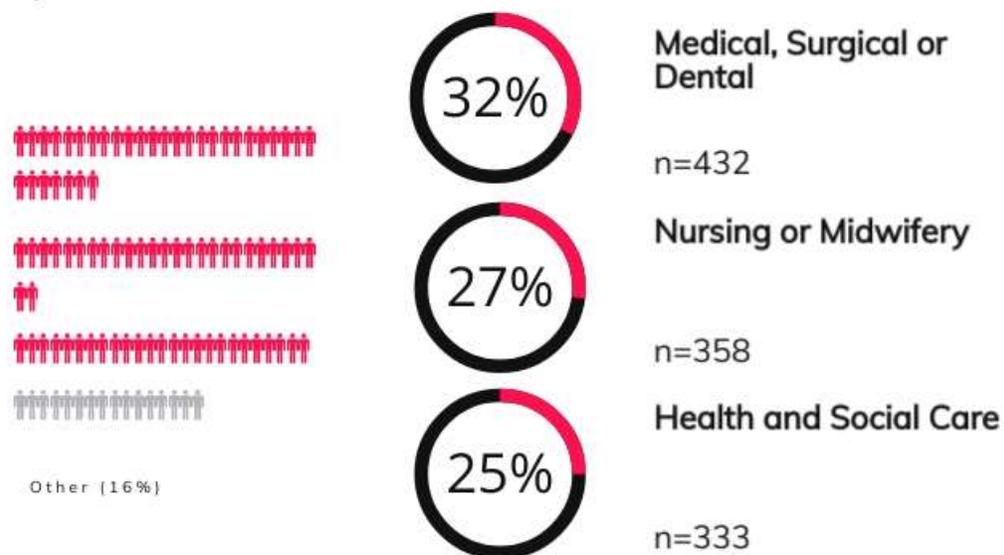


Response: 1,278.

# Results

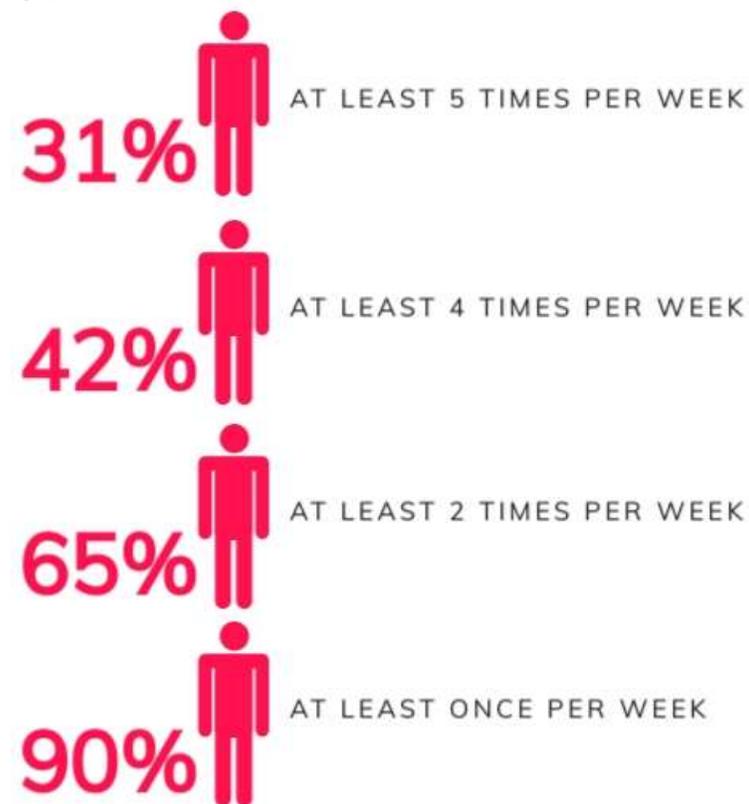
## Q1. Demographics

95% of participants (n=1,212) answered this question.



## Q2. Engagement

99% of participants (n=1,270) answered this question.



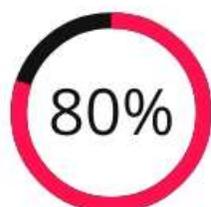
# Results



## Q3. Information Categories

98% of participants (n=1,249) answered this question.

How often do you search for each of the following types of information?



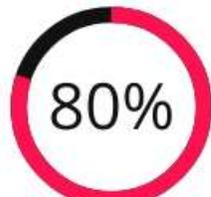
### Drugs Information

39.77% OFTEN; 40.21% SOMETIMES



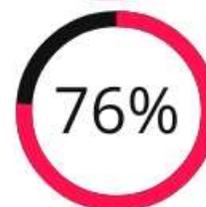
### Treatment or Prognosis

55.46% OFTEN; 38.32% SOMETIMES



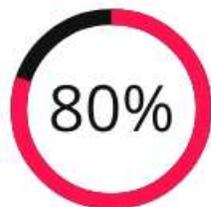
### Diagnosis or Clinical Symptoms

48.68% OFTEN; 43.65% SOMETIMES



### Patient Information

45.54% OFTEN; 30.39% SOMETIMES



### Epidemiology or Pathogenesis

28.96% OFTEN; 51.26% SOMETIMES

# Results

## Q4. Impact on Patient Care

All participants (n=1,278) answered parts or all of this question.

How strongly do you agree/disagree with each of these statements?



### Quality

"Use of library information resources helps me to provide better quality of care for my patients."  
68.52% STRONGLY AGREE; 23.78% AGREE



### Confidence

"Use of library information resources makes me more confident in my decisions."  
67.3% STRONGLY AGREE; 26.02% AGREE



### Current Best Practice

"Use of library information resources assures that my decisions reflect current best practice."  
70.38% STRONGLY AGREE; 23.96% AGREE



### Time

"Use of library information resources saves me time."  
51.02% STRONGLY AGREE; 26.49% AGREE



### Adverse Events

"Use of library information resources has helped prevent an adverse event."  
38.88% STRONGLY AGREE; 23.97% AGREE

# Results

## Q5. Decision-Making

1,274 participants answered parts or all of this question.

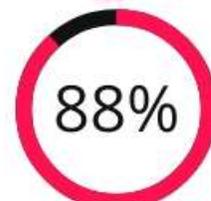
Within the past 12 months, how did the informatin found or provided influence your decision-making?

-  Often
-  Sometimes
-  Never



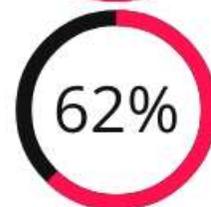
### Decision-Making

" ... was integral to my decision-making."  
43.52% OFTEN; 50% SOMETIMES



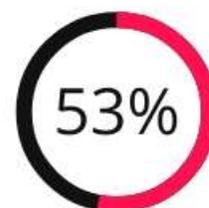
### Patient Management

" ... led to a change in patient management or treatment."  
35.05% OFTEN; 52.97% SOMETIMES



### Diagnostic Testing

" ... led to a change in diagnostic testing."  
23.23% OFTEN; 39.15% SOMETIMES



### Referrals

" ... made it unnecessary to refer a patient for further consultation."  
17.07% OFTEN; 36.07% SOMETIMES



### Confirmed What I Already Knew

" ... confirmed what I already knew."  
44.88% OFTEN; 50.83% SOMETIMES



### Raised Additional Considerations

" ... raised additional issues to consider."  
44.06% OFTEN; 50.79% SOMETIMES

## Q6. Impact on Patient Care: Positive Outcomes Achieved

96% of participants (n=1,229) answered parts or all of this question.

Within the past 12 months, did any of the following change in a positive way as a result of information found or provided?

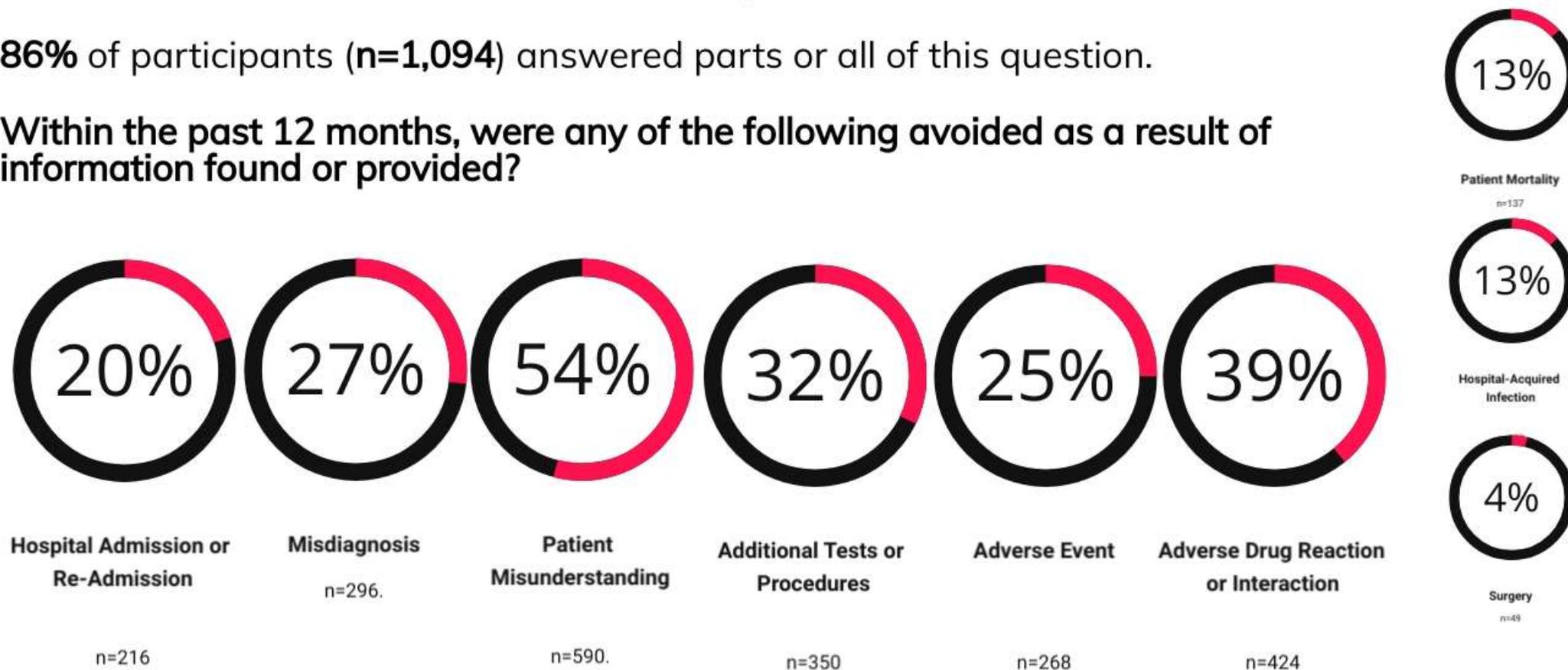


# Results

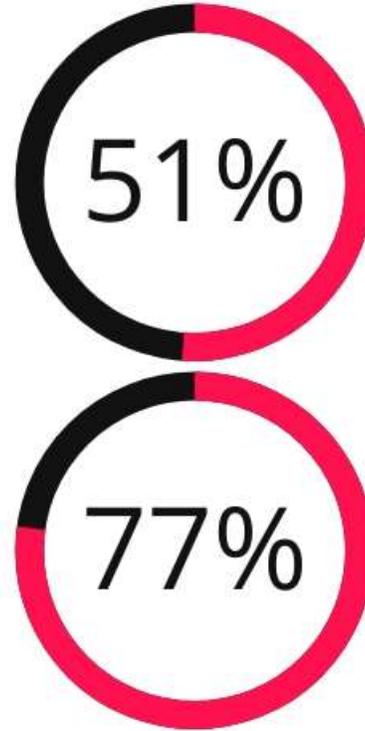
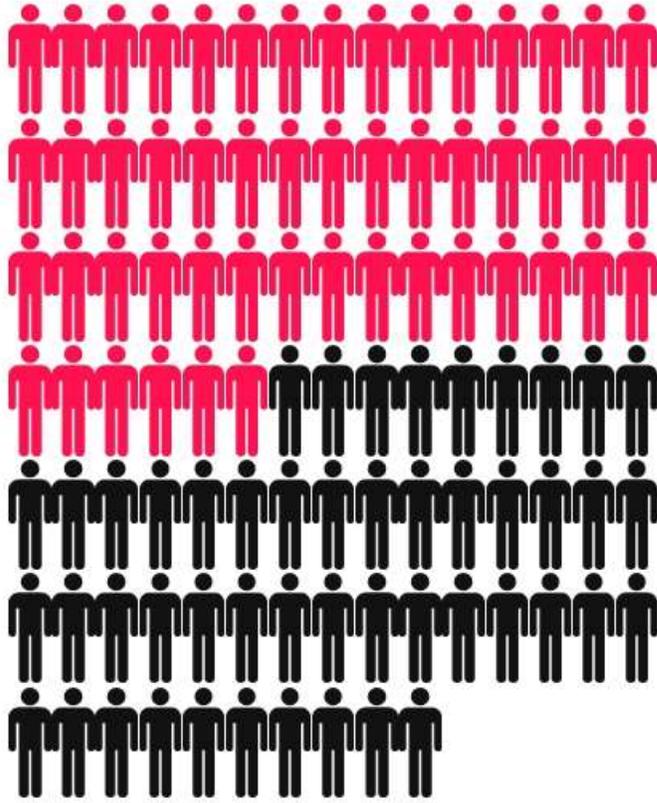
## Q7. Impact on Patient Care: Negative Outcomes Avoided

86% of participants (n=1,094) answered parts or all of this question.

Within the past 12 months, were any of the following avoided as a result of information found or provided?



## Time Savings



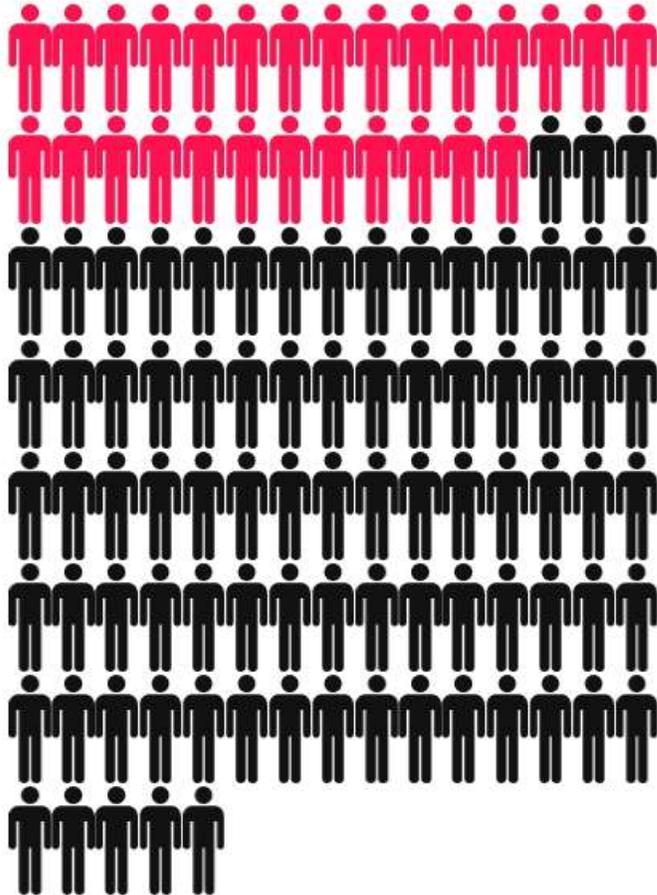
**51% (n=650)** strongly agreed and that use of library information resources **saved time** (Q4); **77% (n=986)** agreed or strongly agreed.

Engaged with Healthcare Pricing Office (Ireland): **estimated cost benefit of ~€0.89 per minute per respondent** (based on demographics of survey population (Q1) and mean salary scales in Irish health service).

Marshall et al (2013): Mean time saved **2.5 hours per adverse event avoided.**

Based on library usage of **~3 times per week** (Q2), and assuming **one adverse event avoided per month**, annual cost benefit among respondents who strongly agreed (n=650, 51%) =  $((150 \text{ minutes} * €0.89) * 650) * 12 = €1.04 \text{ million}$ ; among respondents who agreed or strongly agreed (77%, n=986) = **€1.58 million.**

# Adverse Events



Irish National Adverse Event Study 2 (INAES-2) established cost per adverse event of €4,700

$€4,700 * 268 = €1.25\text{million}$  within our survey population within the past 12 months

## Limitations

- Includes a **greater proportion of active library users** in the study than in the general population of healthcare personnel in the Irish health service
- Further studies are needed to better quantify and monetize **more precise time (and cost) savings**

# Conclusion: Implications? Better integration, more usage

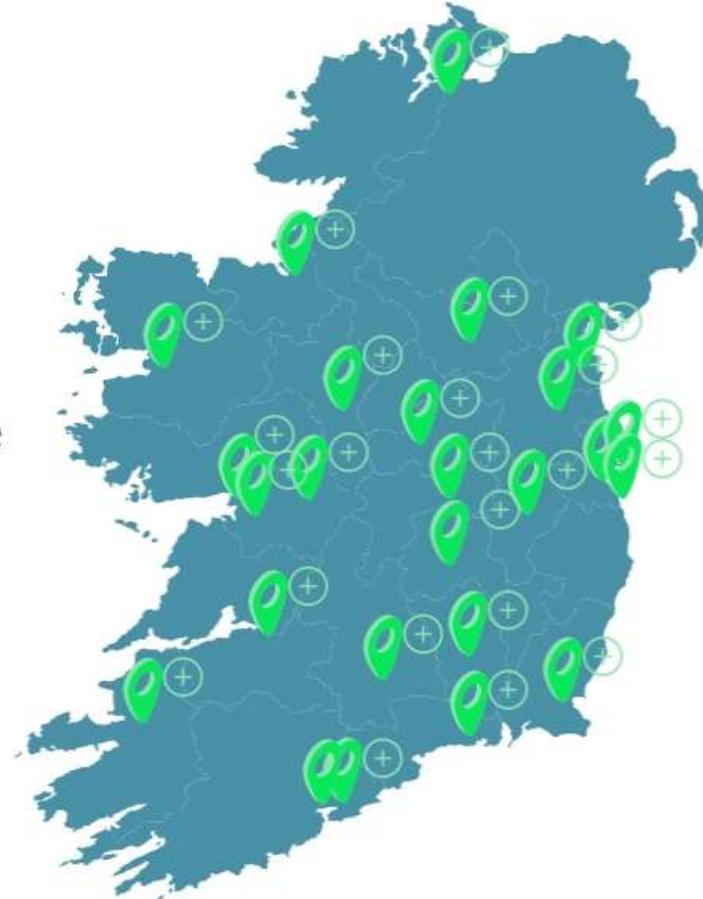
Better **integration** of health library information resources into routine clinical practice: electronic records; clinical systems; + **culture**.

More **usage** of health library information resources and services: simplifying **access sign-ins, interfaces**; more aggressive **promotion and outreach** targeting non- or infrequent users; greater **technological innovation**: mobile **apps, data mining** to interrogate databases, seamless **authentication and personalization, integration** with search engines and social media.

THANK YOU.  
DO YOU HAVE ANY QUESTIONS?

Or in the case of later questions email [Brendan.Leen@hse.ie](mailto:Brendan.Leen@hse.ie).

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