IRLM with Clinical Intervention and Intervention Mechanisms

Determinants

Intervention Characteristics

Complexity: understanding ppm, estimating portion sizes, internalising a new risk calculus
Adaptability to individual dietary habits and routines
Lack of certifiability (no official product list) as potential source of uncertainty

Inner Setting

Specialised celiac centre as trust-enabling clinical environment
On-site Advanced Practice Dietitian expertise as structural facilitator

Outer Setting

Swiss PAL threshold (200 ppm) as pre-existing regulatory legitimisation of the intervention

Characteristics of Individuals

Anxiety about gluten contamination (VAS) as primary individual determinant
Willingness to take risks (VAS) as counterpart disposition
Household composition (mixed vs. gluten-free household)
Health literacy and trust in scientific evidence
Locus of control as potential mediator

Process

Narrative educational video
Threema Work as low-threshold ongoing communication channel
Safety switch as psychological safety net weekly food diary fostering reflective dietary practice
Stakeholder engagement supporting co-design

Implementation Strategies

1. de-implement strict GFD > replace it with the intervention: rGFD

2. Education Video on Gluten Cross-Contamination
> data from scoping review and gluten analysis
> Practice Theory (Schatzki)
> doing less / doing more (Parchman et al.)

3. using co-design elements (Co-Design Playbook) for planing the videos with stakeholders

4. iterative evaluation of the implementation during study visits (tTG, checklist, anti-htTG sIgA & Interviews)

Clinical Intervention

relaxed glutenfree diet (rGFD) allowing cross-contamination with gluten up to 200 ppm gluten

Strategy Mechanisms

1. Substitution of avoidance behaviour reduces cognitive & social burden

2. Calibration of risk perception; reduction of contamination overestimation with reorganisation of existing practice bundles
2. De-implementation framed as active clinical decision

3. Increased perceived relevance and ownership of materials

4. Biomarker feedback calibrates individual risk perception

Intervention Mechanisms

Metaanalysis CeD relapse risk
for 40 mg gluten/d: RR: 1.080
for 150 mg gluten/d: RR: 1.07
for 800 mg gluten/d: RR 1.50
(unlikely to ingest by contamination)
(Rostami-Nejad et al. 2023)

Expected gluten ingestion in rGFD: 60 to 95 mg for a typical consumption; under conservative Q3 assumptions: 554 mg/day.

Outcomes

Implementation

Acceptance

Findings from QUAL

Service

Clinical/Patient

Histology Vh:Cd Ratio (primary)

Serology: tTG-IgA-AK
Stool: GIP / Anti-htTG sIgA
Symptoms
Acceptance (as implementation outcome)
PROs:
VAS fr QoL, wllingness to take risks, anxiety about gluten ingestion