BC PATIENT SAFETY & QUALITY COUNCIL
Working Together. Accelerating Improvement.

Game on!

Use of gamification to engage with and motivate clinicians to improve sepsis care in British Columbia

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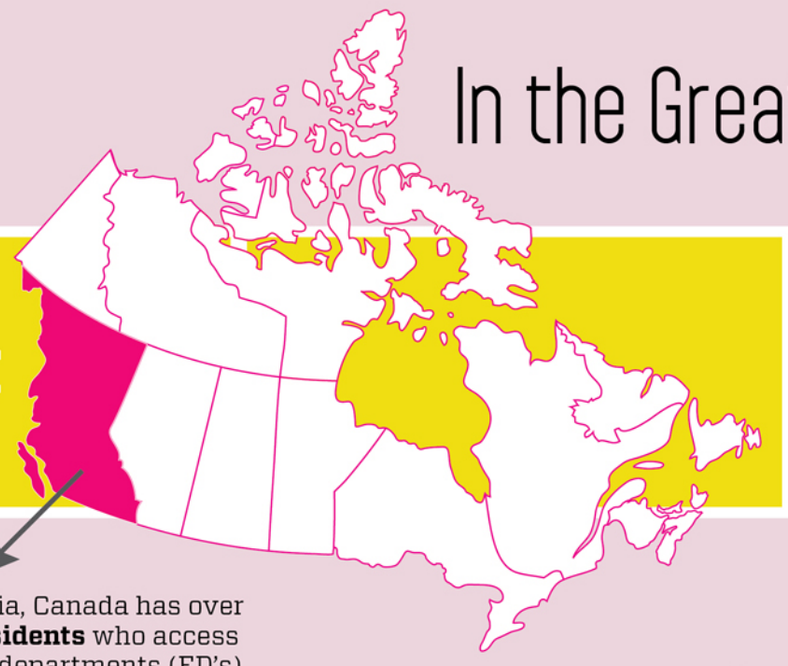
Disclosures: None

How to play:

For every 5 sepsis protocols entered, you save 1 life. Your goal is to save 150 Lives in 150 Days.

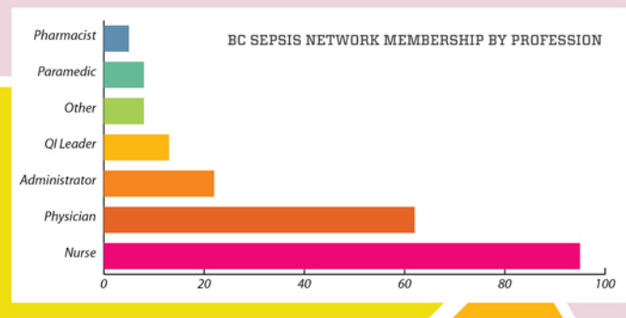
In the Great White North...

Start



British Columbia, Canada has over **4.4 million residents** who access 60 emergency departments (ED's) distributed across a wide geographic area.

In 2012, the BC Patient Safety & Quality Council (BCPSQC) established the BC Sepsis Network; a distributed leadership model of interdisciplinary ED clinicians. Evidence-informed BC Sepsis Guidelines were adopted by the Network, and BCPSQC was tasked with supporting implementation.



...we set out on an important quest.

We launched a voluntary, clinician-led, action-focused campaign, **using elements of games in a non-gaming context (gamification)** to provide meaningful motivation for clinicians to use the protocols and accept a provincial challenge of saving '150 Lives in 150 Days'

When ED's follow severe sepsis and septic shock protocols, one life can be saved for every five patients treated[2], based on the 'Number Needed to Treat' (an epidemiological measure used to assess effectiveness of health interventions). Therefore, if 750 protocols were used, we could save 150 'Lives'.

Sepsis has one of the highest in-hospital mortality rates in Canada[1]. Protocolized sepsis care is an effective way to reduce mortality and morbidity[2]. Despite widespread distribution of the BC Sepsis Guidelines across BC in 2012, provincial mortality rates for severe sepsis averaged 20% and patients were receiving appropriate therapy less than 30% of the time. This is in keeping with literature showing that sepsis protocols are underused[3].

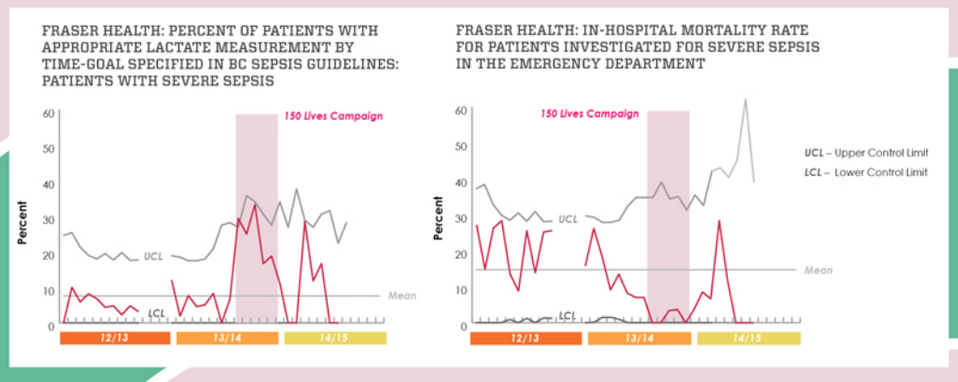
Using elements of games, we made it fun to use sepsis protocols...

We embedded gamification strategies into the campaign to increase engagement and motivate 'players'. The 'game' was wrapped in a meaningful story: saving lives. Game elements included: interactive challenges, clear goals, juicy feedback, points, leaderboards, countdown, and rewards.

ED teams were invited to participate in the campaign, which ran for 150 Days between Oct 2013 and Mar 2014. We created a mobile app to track the number of protocols they used. Leaders at each site compared online entries with patient labels to avoid duplication, creating a sense of fairness in the game.

Additional resources for players included a sepsis education video and a free e-learning module. We partnered with QxMD to embed key sepsis peer-reviewed journal articles within their knowledge translation app.

...and achieved some incredible results.



In one region, **compliance with lactate testing increased and severe sepsis mortality rate decreased** during the campaign to some of their best results ever recorded.

32 teams from the 68 ED's in our province voluntarily joined the campaign, and stayed engaged throughout the 150 Days.

1416 clinicians enrolled in the sepsis e-learning module. 68% completed it.

Gamification helped us save over 150 Lives in 150 Days. What can it do for you?

Over 1000 patients were screened for sepsis and over 750 protocols used to treat severe sepsis and septic shock. 151 lives were saved.

We tracked a **52% growth in the BC Sepsis Network** (to 204 participants) and a 44% average open-rate in our electronic newsletters (industry average 14%).

The sepsis videos together generated **2262 YouTube hits** (the most popular video on our YouTube channel).

We recorded over **9269 BCSepsis.ca web page views** during the campaign, compared to 4562 in the 150 days preceding the campaign announcement.

22,290 clinicians viewed the promoted sepsis literature within the QxMD knowledge translation app.

Finish

Interested in gamification for health improvement? Let's connect!
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1. Canadian Institute for Health Information. In focus: A national look at sepsis. Ottawa 2009
2. Rivers, EP. Point: Adherence to early goal-directed therapy: Does it really matter? Yes. After a decade, the scientific proof speaks for itself. *Chest*. 2010; 138:476-480.
3. Mikkelsen ME, Gaieski DF, Goyal M, et al. Factors associated with nonadherence with early goal-directed therapy in the ED. *Chest*. 2010; 138(3): 551-558.

The 150 Lives in 150 Days campaign led to increased uptake of protocolized care for severe sepsis and septic shock, provided education, and raised awareness about the importance of screening and timely therapies for sepsis patients.

Our greatest success came from offering voluntary participation. The campaign strengthened ties within the Network and gave members experience in taking collective action for change, which can be leveraged for future initiatives.

Voluntary campaigns that incorporate meaningful gamification are an effective and compelling way to engage clinicians to adopt best practices and build momentum for change.