Nightingale’s Novelty: Nursing Infographics for the 21st Century

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Abstract

Florence Nightingale has many notable accomplishments. However, what is not well-known, is that she is recognized as a foundational leader of the infographic movement...

- What ?
- Who ?
- When ?
- Where ?
- Why ?
- How ?
Objectives

- Discuss the increasing utilization of infographics, as coined by Nightingale, in nursing practice.

- Review the elements of evidence-based infographics including critical appraisal.

- Explore the tools and resources freely available to nurses to develop infographics.
What is an Infographic?

- An infographic is data or information that has been synthesized, visually translated, and is presented in a way that tells a story.

- “A picture is worth 1,000 words…”
- 65% of all people are visual learners
- The brain can process images 60,000 x faster
- 800% increase in infographic utilization

(Abliock & Williams, 2014; Bellata, 2013; Bullas, 2015)
NURSE PRACTITIONERS

NPs are the providers of care for millions of Americans. They evaluate patients, diagnose, write prescriptions, and bring a comprehensive perspective to health care.

PRIMARY CARE FOCUS
NPs are educating primary care doctors that make physicians and nurses available for nearly half a century.

AREA OF PRIMARY CARE PREPARATION

REQUIREMENTS FOR PRACTICE

6+ YEARS OF ACADEMIC AND CLINICAL PREPARATION

NPS BY THE NUMBERS
- 34% altres Medicare
- 66% altres Medicaid
- 82% altris Public Insurance
- 31% altris Uninsured

INCREASING IN NUMBER

PREPARATION FOR THE FUTURE

(AANP, 2014)
**Macho: My Little Boy**

Evoking emotion to prompt change... **Experience**

(Nightingale's Novelty)

(VIP Pet Insurance, 2014)
**The Effects of Excessive Sodium on Your Health & Appearance**

- **High Blood Pressure**: A leading risk factor for death in women in the United States, contributing to nearly 350,000 female deaths each year.
- **WHERE DOES IT COME FROM?**
  - 65% processed foods
  - 25% restaurant
  - 10% other sources

- **77.9 million American adults** have high blood pressure.

- **Kids** who have a high-sodium diet are twice as likely to develop high blood pressure as kids who have low-sodium diets.

- **3,400mg** is the amount of sodium in the average American’s diet.
- **1,500mg** is recommended by the ADA for ideal heart health.

**Your Health**

- Excess levels of sodium/salt may put you at risk for:
  - Stroke
  - Heart failure
  - Osteoporosis
  - Stomach cancer
  - Kidney disease

**Your Appearance**

- Excess levels of sodium/salt may cause:
  - Increased water retention, leading to:
    - Puffiness
    - Bloating
    - Weight gain

[heart.org/sodium](http://heart.org/sodium)

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**Obesity**

- **1 in 3 children** and adolescents, ages 2-19, are overweight or obese.
- An estimated 32.5 million children, ages 5 years or younger, spend 39 hours per week in childcare settings where they may consume most of their daily calories.

**FACT**

- **Between 40% and 50%** of toddlers watch more television than is recommended.

**Risk Factors**

- Children who are overweight from the ages of 7 to 13 may develop heart disease as early as age 25.
- Obese children are twice as likely to die before age 50 than their thinner peers.

**Obesity May Be Prevented By**

- Physical activity
- Good nutrition
- Less screen time
- More sleep

[heart.org/healthierkids](http://heart.org/healthierkids)

(American Heart Association, 2014)
Who invented infographics?

Florence Nightingale

“She is probably the mother of the modern infographic.”

-Synthesized Data
-Presented Visually
-To tell a story
-Provoked Action

(What’s the Pont, 2013)
Lady with the Infographic

- Born in Florence, Italy
- 2/2 sisters, wealthy, socially well connected
- Parents privately supported education
- Depressed/Suicidal: Not like the others...
- Canceled her engagement, Marriage = Death
- Reluctantly permitted to go to Nursing School
- Saw opportunity in Crimean War

Documented = EVERYTHING

(Cook, 1913; Gill, 2005; Strachey, 2012)
“To Understand God’s thoughts, one must study statistics...the measure of His purpose.”

- Florence Nightingale

(Google Images, 2015)
The Areas of the blue, red, & black wedges are each measured from the centre as the common vertex.

The blue wedges measured from the centre of the circle represent area for are the deaths from Preventible or Mitigable Zymotic Diseases, the red wedges measured from the centre the deaths from all other causes.

The black line across the red triangle in Nov 1854 marks the boundary of the deaths from all other causes during the month.

In October 1854, & April 1855, the black area coincides with the red, in January & February 1856, the blue coincides with the black.

The entire areas may be compared by following the blue, the red & the black lines enclosing them.
What does an infographic have that a poster does not?

- Visual
- Synthesized Data
- Storyline
- “Tickler”: It will lead to action/info seeking

(Abliock & Williams, 2014; Bellato, 2013)
Infographic: Knowledge to Action

- Reform of British Military Hospitals
- First science-based nursing school
- Public Health Reform
- Policy Reform

Nightingale’s Novelty

(Dogherty, et al., 2013)
When did infographics emerge in modern day?

- Journalism: 1970’s-1980’s
  - *The Sunday Times*
  - *USA Today*
- Marketing
  - 12% increase in business
- Healthcare
  - Government Agencies: IOM
  - Large Organizations: Kaiser Foundation

(Siricharoen, 2013)
Why are infographics important?

**VIRAL** potential: Can deliver in any format

**GLOBAL** potential: Instantly dispersed

(Fan & Befit, 2013; DeNicola, Good, & Newton, 2014)
Why are infographics important?

- BIG DATA + Information Overload = ???
- Social Media Explosion
- Low Literacy Levels

Change of Information Seeking Behavior:
- Filters
- Push/Pull Phenomenon
- Internet access by mobile device

NEEDED = TEASERS (Infographics)

(Bellata, 2014; Brumberger, 2011)
Next Gen

- **Visual Literacy**: The ability to BOTH interpret and create visual information.

- **ACRL Visual Literacy Competency Standards for Higher Education (2011)**:
  - Ability to determine nature of visuals needed
  - Interpret & analyze meaning of visual media
  - Evaluate images and sources
  - Use visual media effectively
  - Design and create meaningful visual media

(ACRL, 2011; Brumberger, 2011)
How can infographics be utilized in my work setting?

Knowledge to Action Framework

- Health Literacy
- Nursing Education
- Bedside Nursing
- Advanced Practice
- Policy

(Dogherty, et al., 2013)
How can infographics be utilized in my work setting?

- **Health Literacy**: ability to obtain, communicate, and utilize health information to make informed choices regarding care.

- **75 Million Americans = Inadequate Skills**
  - National Action Plan to Improve Health Literacy
  - Problem: focused on written language
  - Needs focus on visual information

(Koh, et al., 2012; CDC, 2015; O’Neill, et al., 2014)
Example:

- Introduction
- Synthesized Data
- Action Plan

(AHA, 2015)
How can infographics be utilized in my work setting?

- **Nursing Education:**
  - Dissection
  - Course Syllabus
  - Introduction to difficulty concepts
  - Supplement to reading assignments: FON

- **Students should produce the infographic:**
  - Critical Thinking
  - DNP Capstone Proposal

(Mixer, McFarland, & McInnis, 2008; Bradshaw, 2015; )
Example:

Purpose

PICO

Design

Implementation

Evaluation

(Bradshaw, 2015)
How can infographics be utilized in my work setting?

- **Bedside Nursing**

  **Vital Sign Reporting:**
  Allison Schwartz, RN, BSN + Team
  St. Barnabas, Livingston, NJ
How can infographics be utilized in my work setting?

- Advanced Practice
  - Patient Education
  - Use of Medication

(Lung Association, 2014)
How can infographics be utilized in my work setting?

- **Policy & Administration**
  - Show the data
  - Present effectively
  - Creates buy-in
  - Prompts Action/Change
Critical Appraisal: Elements

- **Effective infographics should:**
  - Have a stand-out title, opening statement
  - Present text that is easily read
  - Have clear images (copyright free)
  - Maintain consistent font, shape, color
  - Tell a story or support a position
  - Provide a source for the information

(Davidson, 2014)
Critical Appraisal: Color & Design

(Google Images, 2015)
Could I make an infographic?

**YES!** If I can do it, you can do it…

**Reflective Analysis** (Bradshaw, 2015):
- Skill required = Skill for Power Point
- Time required = Time for Power Point
- Piktochart > Power Point
- **Initial Investment to Learn:**
  - 3 days
  - 3 hours/day
  - Total of 3 sessions

(Bradshaw, 2015)
Infographic Question Matrix

Abliock & Williams (2014):

“Recipe for an Infographic”

1) Audience
2) Problem
3) Choices
4) Thinking
5) Content
Infographic Design Matrix

- Abliock & Williams (2014):
  - Inquiry Question
  - Organize & Visualize
  - Design

(Abilock & Williams, 2014; Krauss, 2012)
Sketch

(Bradshaw, 2015)
Nightingale’s Novelty

Piktochart

(Piktochart, 2015)
Piktochart

(Piktochart, 2015)
Infographic

(Bradshaw, 2015)
Other Lessons Learned

- If printing, be aware of the margins
- Be aware of the length
- Without data synthesis, it is a poster
- EVERYONE ❤ infographics

Limitations:
- Use infographics when appropriate
- Free v Paid Account
- + Offer Educator’s Discount
- Watermark
- Vertical v Horizontal
- APA (can’t get the italic to work)

(Bradshaw, 2015)
Summary: “More Notes on Nursing”

- Infographics are visual representations of data, that have been translated, and can tell a story.

- Channel your inner Florence Nightingale to work toward visual literacy and to prompt action/change in your nursing work.

- You can learn to create effective infographics.

- Infographics have been effective in the past and will be influential in 21st Century nursing practice.
Questions
Thank You

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