



มหาวิทยาลัยมหิดล
คณะแพทยศาสตร์
โรงพยาบาลรามาธิบดี

Ramathibodi International

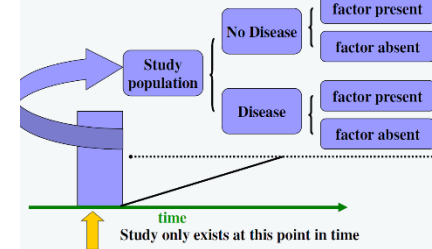
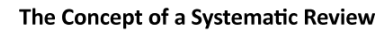
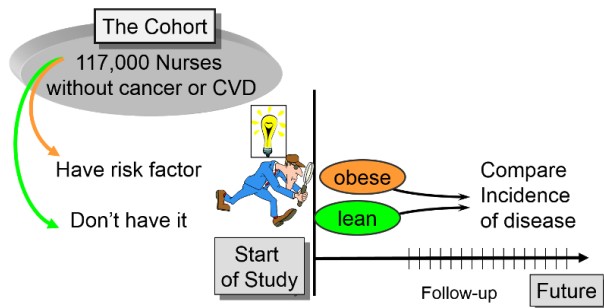
Academic Conference (RIAC) 2018

Big Data in Health Research

Oraluck Pattanaprteep, PhD.

Section for Clinical Epidemiology and Biostatistics

Faculty of Medicine Ramathibodi Hospital, Mahidol University





The problems we faced:

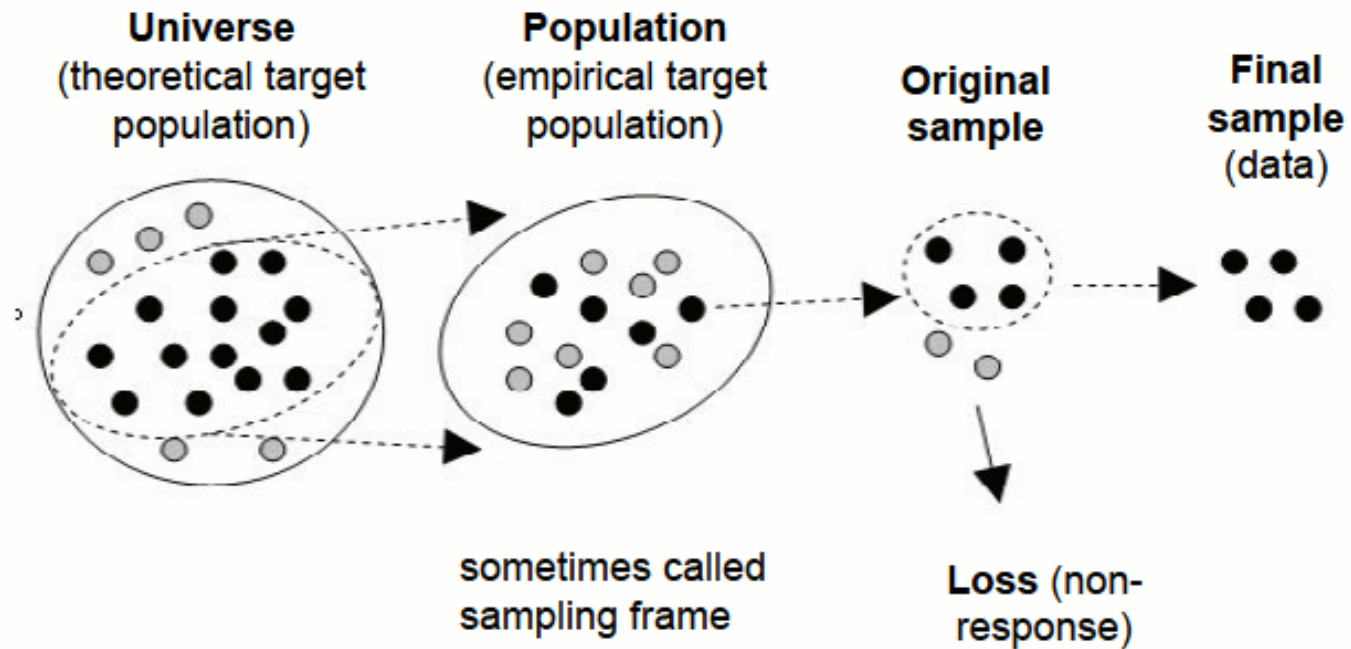
- Data storage – cost and maintenance
- Type of data – text, image
- Not in electronic file – no electronic device



Mahidol University

Faculty of Medicine Ramathibodi Hospital

Section for Clinical Epidemiology and Biostatistics





Mahidol University

Faculty of Medicine Ramathibodi Hospital

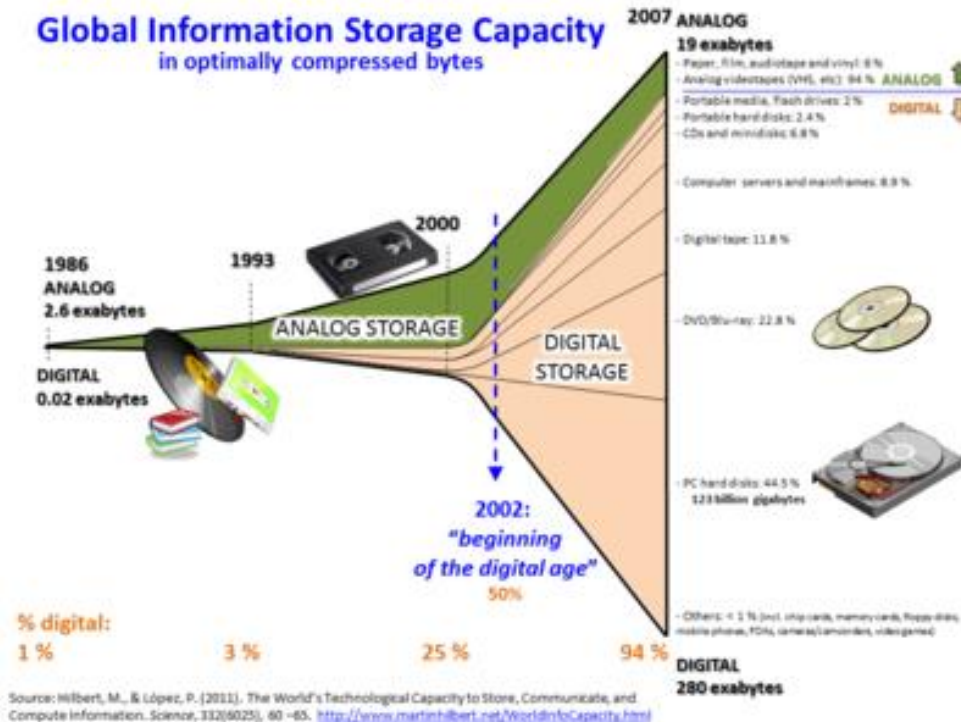
Section for Clinical Epidemiology and Biostatistics





The problems we faced:

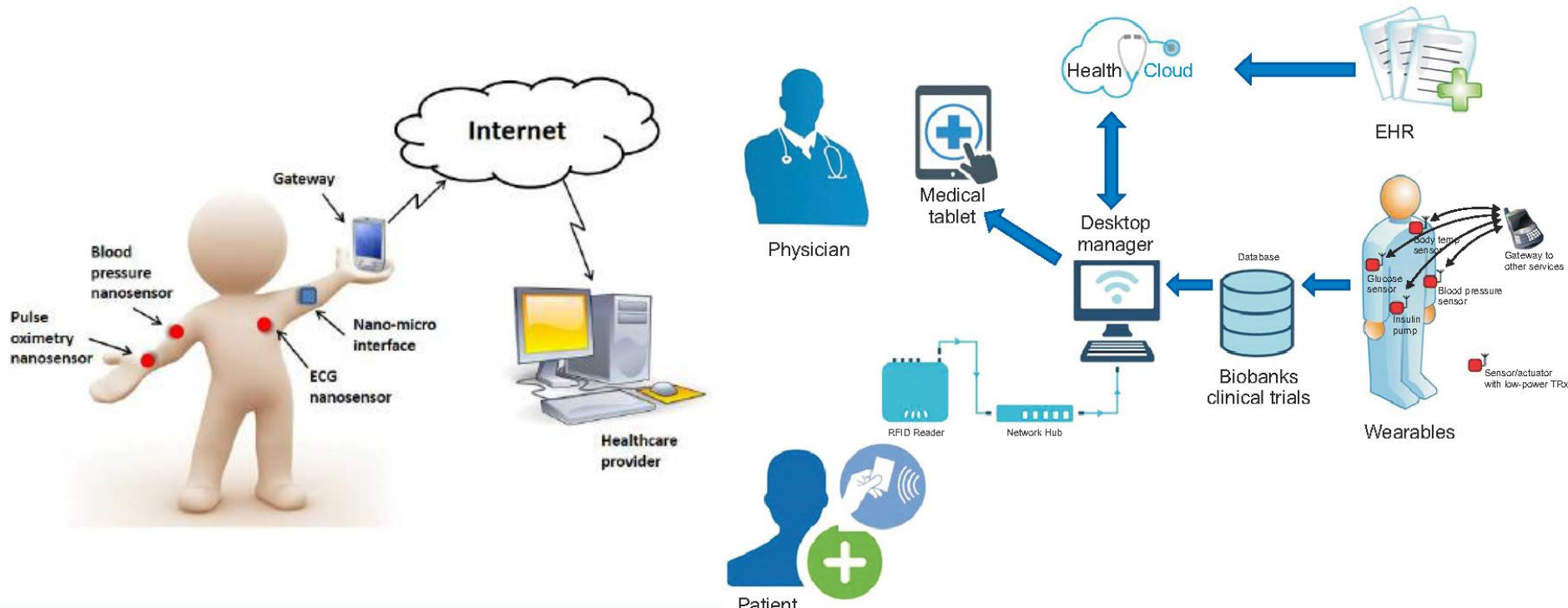
- Data storage – cost and maintenance





The problems we faced:

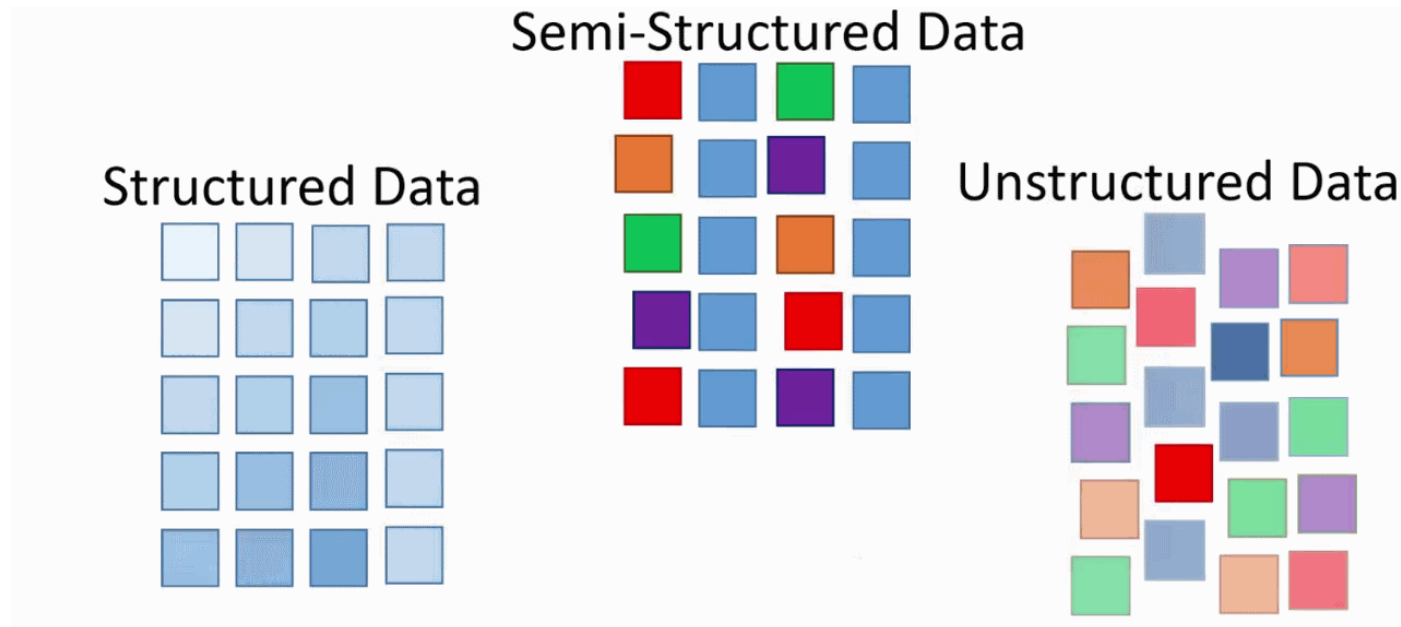
- Not in electronic file – no electronic device





The problems we faced:

- Type of data – text, image



typically

Text, images, audio, video



BIG DATA & AI LANDSCAPE 2018



© Matt Turck (@mattturck), Demilade Obayomi (@demi_obayomi), & FirstMark (@firstmarkcap) mattturck.com/bigdata2018

FIRSTMARK
EARLY STAGE VENTURE CAPITAL

Wisdom of the Land



PubMed [Create RSS](#) [Create alert](#) [Advanced](#)

Format: Summary ▾ Sort by: Best Match ▾ Per page: 20 ▾ [Send to ▾](#)

Search results

Items: 1 to 20 of 4508

<< First < Prev Page 1 of 226 Next > Last >>

☐ [Big data for health.](#)

1. Andreu-Perez J, Poon CC, Merrifield RD, Wong ST, Yang GZ.
IEEE J Biomed Health Inform. 2015 Jul;19(4):1193-208. doi: 10.1109/JBHI.2015.2450362. Epub 2015 Jul 10. Review.
PMID: 26173222 [Free Article](#)
[Similar articles](#)

☐ [Technical challenges for big data in biomedicine and health: data sources, infrastru](#) 2. [analytics.](#)

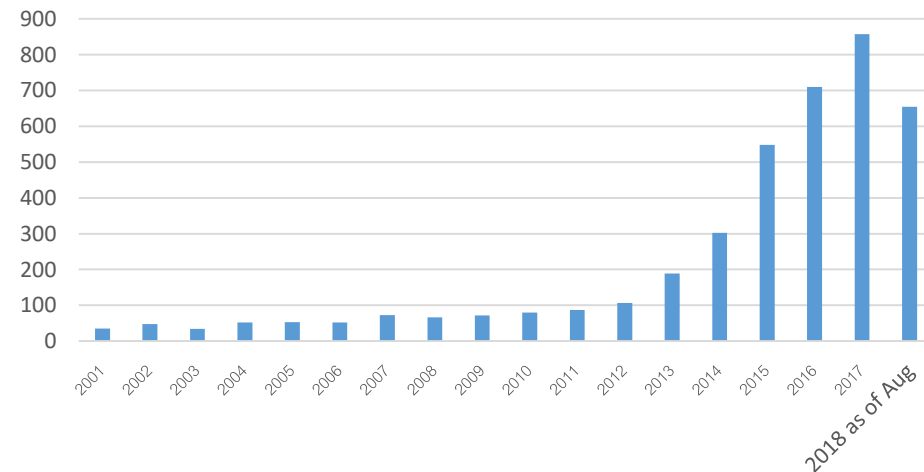
2. Peek N, Holmes JH, Sun J.
Yearb Med Inform. 2014 Aug 15;9:42-7. doi: 10.15265/IY-2014-0018. Review.
PMID: 25123720 [Free PMC Article](#)
[Similar articles](#)

☐ [Big data in global health: improving health in low- and middle-income countries.](#)

3. Wyber R, Vaillancourt S, Perry W, Mannava P, Folaranmi T, Celi LA.
Bull World Health Organ. 2015 Mar 1;93(3):203-8. doi: 10.2471/BLT.14.139022. Epub 2015 Jan 30. R
PMID: 25767300 [Free PMC Article](#)
[Similar articles](#)

☐ [Creating value in health care through big data: opportunities and policy implications](#)

4. Roski J, Bo-Linn GW, Andrews TA.
Health Aff (Millwood). 2014 Jul;33(7):1115-22. doi: 10.1377/hlthaff.2014.0147.
PMID: 25006136
[Similar articles](#)





Big data analytic approaches

1. **Real time analytics** and Meta-analysis that integrates multiple data sources e.g. bedside healthcare streaming data
2. **Multi-level model** (hospital and national) data; longitudinal and mixed model for temporal dynamic data rather than static data
3. Data mining, **pattern recognitions** for trends, and pattern detection
4. Natural language processing for **text data mining**
5. Artificial intelligence with **deep learning** (e.g., neural network, support vector machine, dynamic state space model) for automated analysis and information retrieval

