

# Design Exercise: Flu Dashboard

- **Audience 1: Public Health Researchers (2 teams)**
  - Visualization literacy?
  - Data literacy?
  - Tasks?
- **Audience 2: Travelers (2 teams)**
  - Visualization literacy?
  - Data literacy?
  - Tasks?
- **Use Five Design-Sheet Methodology (45 minutes)**

# Laboratory-Confirmed Influenza Cases in the first ten weeks of 2010

Week	Asia	S. America	Australia	N. America	Asia	S. America	Africa	Europe	Europe	Africa	N. America
	Afghanistan	Argentina	Australia	Canada	China	Colombia	Egypt	Germany	Ireland	South Africa	USA
1	5	4	2	41	2179	36	739	26	23	0	366
2	13	21	1	15	2213	36	396	24	8	1	396
3	4	6	1	8	2228	14	192	18	4	0	447
4	0	1	0	14	2027	11	80	NA	8	0	402
5	0	4	1	12	1813	8	56	NA	4	0	404
6	0	0	1	6	1353	9	47	NA	0	0	361
7	1	3	0	6	799	7	32	NA	0	0	380
8	1	1	4	7	1218	5	16	NA	1	1	424
9	NA	0	3	3	1333	7	8	3	0	0	445
10	1	3	1	7	1614	5	8	7	0	0	475

Source: World Health Organization FluNet database (<http://who.int/flunet>)

## Tasks (15 minutes for discussion and sketching, 3 minutes per team for reporting back)

1. Form teams of 5 to 8 students.
2. Discuss how you would visualize this data set. *Do not ask the instructor if any questions come up during your discussion*, instead note the question and decision taken.
3. Create sketches on provided paper using the provided markers (black plus two colors).
4. Report results back to class, including the questions that have come up in your discussion.

# Design Exercise: Flu Dashboard

- **Audience 1: Public Health Researchers (Team 1 and Team 3)**
  - Visualization literacy? high
  - Data literacy? high
  - Tasks?
    - Need up-to-date data
    - See how patterns change week by week
    - Identify outbreaks based on patterns in the data: visually and algorithmically
    - Check effectiveness of flu vaccines (data: low, medium, high)
    - information about strains (data: percentage per strain, adding to 100)

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- **Audience 1: Public Health Researchers (Team 1 and Team 3)**
  - compare current year to previous years
  - compare geographic locations to each other: by country
  - export data and figures
  - see age information and death information (per case age in years, per country # of flu deaths)
  - incorporate population size of each country and number of cases tested vs confirmed (pop. per country, per country per week # cases tested)
  - number of hospitalizations (per country per week # of cases)
  - number of doses of flu meds in stock (per country per week # doses)

# Design Exercise: Flu Dashboard

- **Audience 2: Travelers (Team 2 and Team 4)**
  - Visualization literacy? low
  - Data literacy? low
  - Tasks?
    - which countries have the highest/lowest number of cases? (over time)
    - during what time of the year do the cases peak?
    - how does the number of cases change over the course of a year?
    - what will the situation be like at time point X? (time range X->Y)?
    - do I need to get vaccinated before I travel? (recommendation: yes/no)

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- **Audience 2: Travelers (Team 2 and Team 4)**
  - what strains are currently in circulation and does my vaccine (?) cover that? (data: percentage per strain, adding to 100; yes/no for vaccine)
  - What is my risk of having severe complications if I get the flu? (low, medium, high)
  - What medical care would be available in the country? (low/medium/high per country)
  - How “bad” is the most common strain in that country? (per strain: not bad, bad, very bad)
  - Are there any travel restrictions for that country? (yes/no)