8. Heat island effects in urban areas will
7. Increased ragweed pollen (Climate)
6. Increased pollen due to higher tem-
5. Preventable asthma deaths in per-
4. Preventable health care costs
3. Doctor visits, emergency department
1. Missed school or work days (Health)

Introduction
Currently available epidemiologic evidence
does not demonstrate that the contribu-
tion of pollen to emergency department vis-
ts for respiratory chronic diseases2,3. The
underlying mechanism could be an in-
flammatory response4. The annual cost
of allergic rhinitis has been estimated to
be about 11.2 billion dollars5,6. A pollen
alert system could decrease the ef-
fects of pollen exposure on sensitive per-
sons by providing notifications to poten-
tially im-
pacted persons and health care providers
prior to increases in pollen levels. The
scientific evidence supporting a national
pollen surveillance system is summarized
in Table 1. These recommendations were
included in a pollen white paper7.

Table 1: Evidence in Support of a Pollen Surveillance System
1. Missed school or work days (Health)
2. Over-the-counter medication sales (Health)
3. Doctor visits, emergency department visits and inpatient hospitalizations (Health)
4. Preventable health care costs (Health)
5. Preventable asthma deaths in per-
sons 65+ years old (Health)
6. Increased pollen due to higher tem-
perature and more carbon dioxide (Climate)
7. Increased ragweed pollen (Climate)
8. Heat island effects in urban areas will
increase further ambient tempera-
ture and available carbon dioxide (Cl-
imate)

Criteria for a national pollen surveillance system in the US were based on identi-
fied NAB and EAN pollen counting sta-
tions features (Table 3). No single pollen
reporting system—NAB, EAN, USA Nation-
al Phenology Network or Pollen.com—sati-
sfied all of these requirements.

Figure 1: Pollen Moni-
tors in US - NAB

Figure 2: Pollen Moni-
tors in Europe - EAN

Table 2: NAB and EAN Differences
1. Population: 7,635,841 (NAB)
2.289,476 (EAN), p<0.05
2. Square miles: 64,023/15,544
3. Pollen stations: 2,314/0, p=0.01
4. Persons/Monitor: 38,856,904,833,823
5. Area/Monitor: 38,491,109,093

Notes: 1) In March 2012 there were 82 pollen counting stations in 35 US states.
2) Person correlation between per-
s/monitor and area/monitor was not significant, r (33) =0.086, p=0.05, 2) Al-
si, in March 2012 there were 105 pollen counting stations in 36 countries in Eu-
rope. Person correlation between per-
s/monitor and area/monitor was not significant, r (34) =0.298, p=0.05.

Conclusions
Implementation of a national pollen
surveillance system, based on the at-
tributes included in Table 3, could result
in fewer persons utilizing health care ser-
ices, missed work and school days, and
asthma deaths.

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support the inclusion of pollen as a nation-
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cation in a scientific journal, 2013.

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vironmental Public Health Tracking)
and the other for the EAN, were not signif-
ificant, r (34) =0.298, p=0.05.

Table 3: Pollen
Surveillance Criteria
1. Representative spatial, temporal and
population coverage
2. Uniform methods used to record
pollen
3. Daily/hourly pollen readings
4. Pollen grains classified by taxa
5. Multi-day pollen alerts
6. Accuracy of pollen alerts evaluated
7. Pollen & respiratory health outcomes linked
8. Pollen data easily available
9. Sustainability and funding addressed