

US EPA ARCHIVE DOCUMENT



## BACKGROUND

Recognizing the diversity of communities is an important first step in being able to complete accurate and focused risk assessments. Communities vary in almost every aspect; from how and where community members spend their time, to the type of materials they come into contact with, to the food and water they consume. All of these aspects influence the opportunities that community members have to come into contact with potentially harmful substances. Exposure and risk assessments cannot be accurate unless they account for the community's unique activity and dietary patterns. This can be quite challenging given the great diversity of geography, climate, demographics, work opportunities, food and water availability, and cultural practices relevant to various populations.

Acknowledging these challenges The LifeLine Group has developed probabilistic modeling tools with the flexibility to incorporate community specific information into current and scientifically rigorous exposure and risk assessment modeling tools.

## LIFELINE™ CAPABILITIES

Current LifeLine™ software are available and can

- Make use of **community specific information** regarding dietary and activity patterns. Populations not represented by nationwide databases are currently not considered when risk assessments are performed using these databases. LifeLine tools correct this gap by creating the capacity to consider community specific data in exposure and risk assessments. LifeLine tools allow assessors to complete a relevant risk assessment for **any unique population**.
- Transform a wide array of information from various sources regarding diet and activities into a cohesive data file useable within risk assessment software. Relevant but **“non-traditional” data sources** such as information from knowledgeable community members, narrative or interview information, data from non-scientific publications, or any other pertinent information source can be considered in a risk assessment.
- Update current dietary or activity databases with new information. **Databases can be kept relevant and current** as new information becomes available.
- Account for **age and seasonally dependent variations** in food consumption and activity patterns.
- Use **point values, distributions, or supply your own set of data points** for most data entry parameters. A range of dietary and activity patterns can be considered within a community. The assessor is not forced to choose a single data point to represent the whole community.
- Permits the assessor to **consider the potential effect of remediation strategies**. By using this software communities can identify strategies which will most effectively reduce their exposure to potentially dangerous substances, set priorities, and justify the use of limited resources on the most effective methods for reducing risk.

## AVAILABLE LIFELINE™ TOOLS

Four software tools exist currently which can help assessors account for unique dietary and activity profiles of communities when conducting an exposure and risk assessment. These tools along with user tutorials and files are available to interested parties free of charge.

Available LifeLine software includes:

- *LifeLine Dietary Record Generator™ (DRG™)*
- *LifeLine Customized Dietary Assessment Software™ (CDA™)*
- *LifeLine Activity Record Generator™ (ARG™)*
- *LifeLine Community Based Exposure and Risk Assessment Software™*

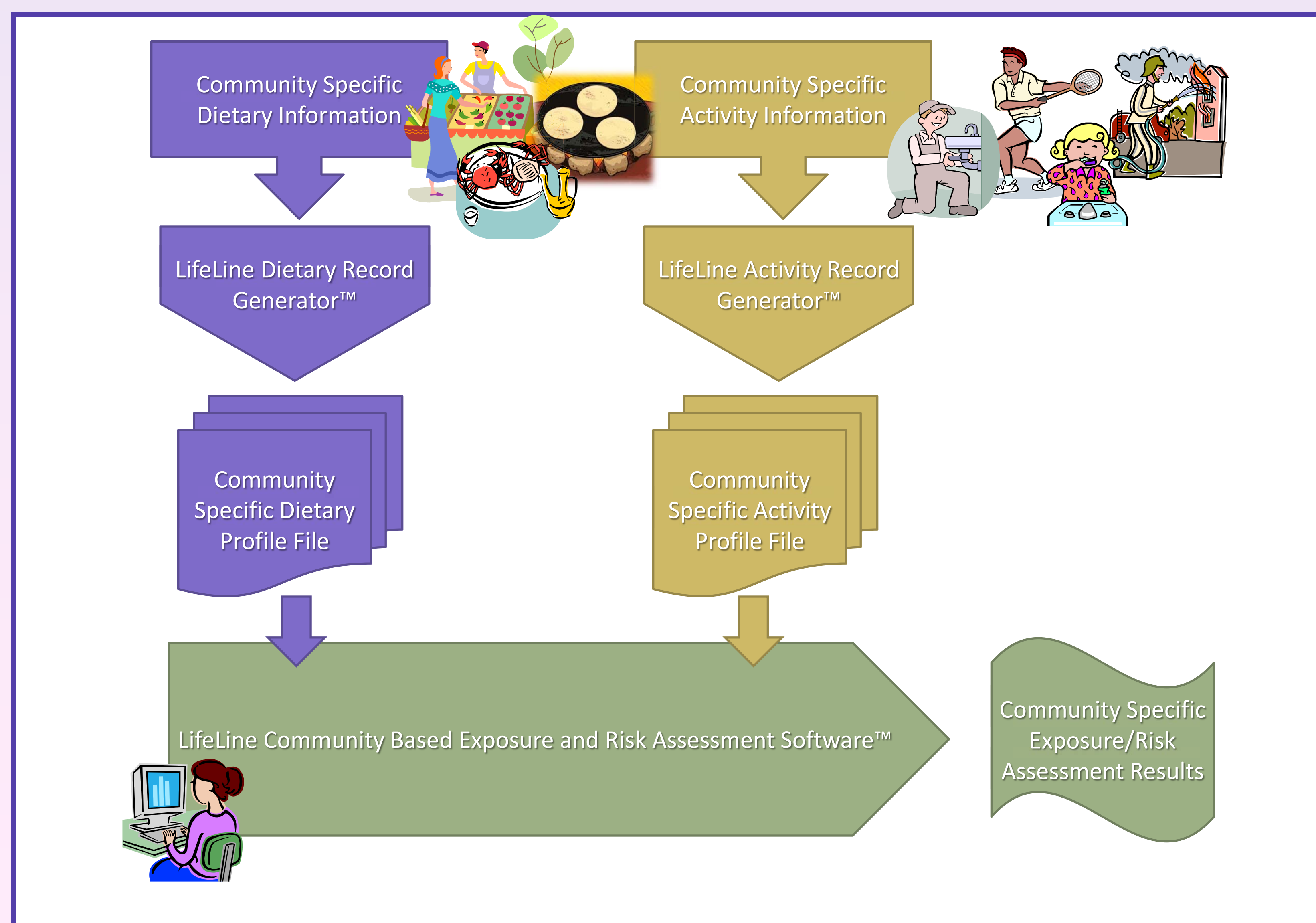
The LifeLine™ Group has also developed multimedia tutorials for the available software

- *Dietary Record Generator™ Software Tutorials for conceptual and technical use of the software (available in English and Spanish)*
- *Activity Record Generator™ Software Tutorials for conceptual and technical use of the software*
- *Tutorials for the LifeLine Community Based Exposure and Risk Assessment Software™ are in progress*

Dietary Record Generator™ dietary profile files are available for several community specific groups. These DRG™ files can be used in several ways to include being used directly in an exposure and risk assessment for one of the populations represented by an available DRG™ file, modified to more closely represent a specific community before it is used in an assessment, or they can serve as a template for those who seek to build a dietary profile file for a community of interest.

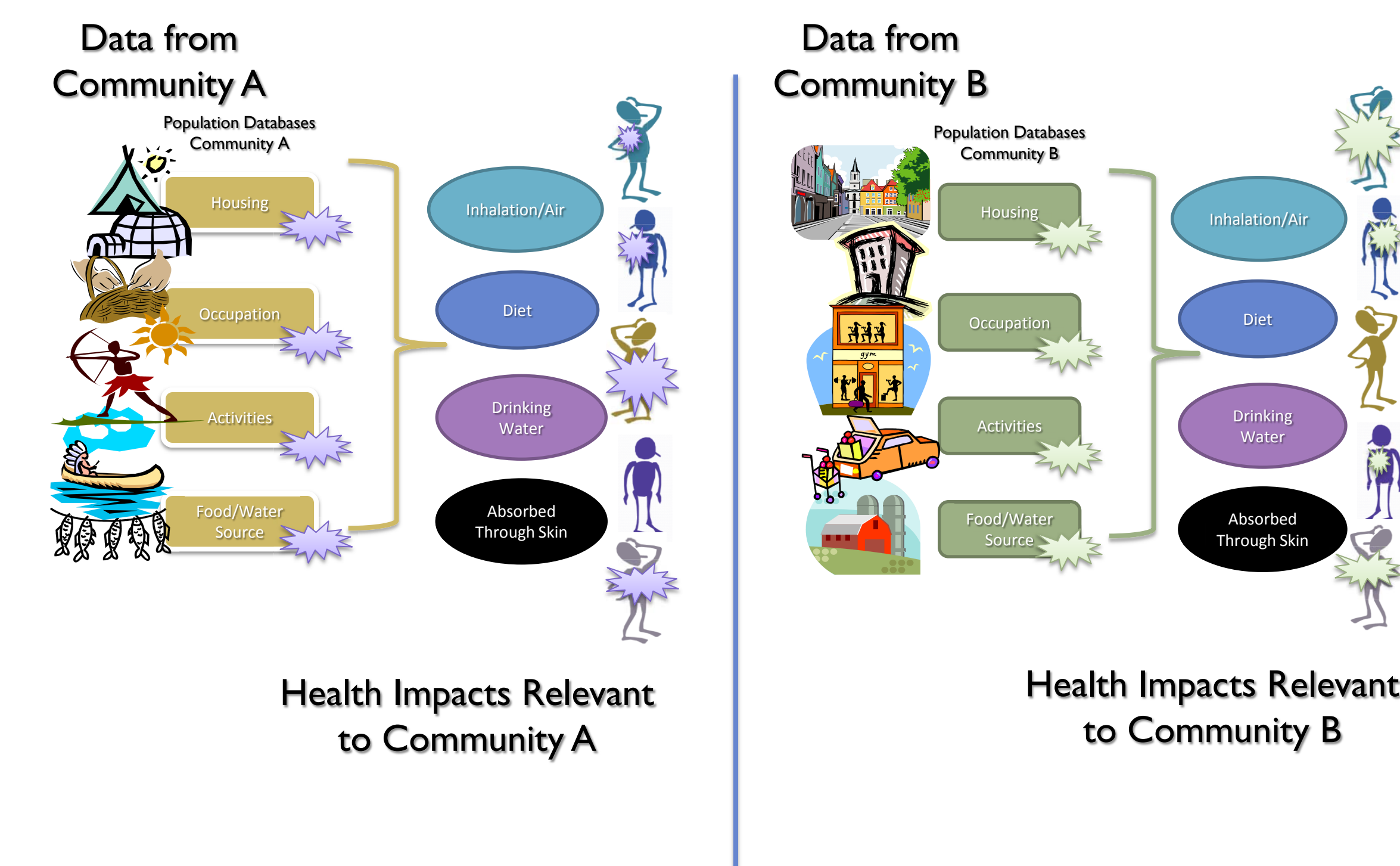
- *The Compendium of Alaska Traditional and Subsistence Dietary Files™ (OPPTS, US EPA)*
- *The Compendium of Traditional Dietary Files for First Nations and Inuit in Arctic Canada™ (FNIHB, Health Canada)*
- *Compendium of Southwestern US Diets, including Tribal and Mexican influenced diets (US EPA)*

## CONCEPTUAL DIAGRAM FOR LIFELINE™ TOOLS



## SUMMARY

Existing LifeLine™ software and tools are available to any interested party which will allow assessors to use community specific activity and dietary information to characterize opportunities for exposure for any unique population.



When combined with information regarding the location and concentrations of the potentially harmful substance (also community specific) and health impact information, **a community focused exposure and risk assessment can be performed for any population using information specific to the community and LifeLine™ tools.**

## LIFELINE™ SOFTWARE ACCESS

All LifeLine™ software, tutorials and associated materials are protected by international copyright. As a 501(c)(3) non-profit organization, The LifeLine Group makes these tools and materials available to interested parties without cost.

To download LifeLine™ software or to access other materials, please visit the website

[www.TheLifeLineGroup.org](http://www.TheLifeLineGroup.org)

For other questions or for further assistance, please contact us.

## CONTACT INFORMATION

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