Ethiopia Risk Pathways workshop ILRI/IFPRI Addis Ababa, 25-26th September 2008

1. List of participants (see Annex 1)

2. Opening address: Dr Berhe Gerbreezgiabher, Head of plant diseases and animal health department, Ministry of Agriculture and Rural Development

The overall Pro-poor HPAI Risk Reduction Strategies Project and the position of Ethiopia within the project were described. Ethiopia, while free from HPAI, has neighbours that have been infected by HPAI and so is at risk. Trade may be a minimal risk as DOCs are imported from HPAI-free countries only and most trade through border markets flows out of Ethiopia to surrounding countries due to price differentials between the countries.

Other HPAI projects in Ethiopia:

- AU-IBAR (SPINAP-AHI): Surveillance and capacity strengthening
- SPS-LMM (USAID): Delivering systematic information on the spatial distribution and production environment description of poultry farms in Ethiopia.
- CIRAD-EMVT: Transmission of Newcastle disease from market to backyard poultry (PhD: student: Hassan Chaka, CIRAD), in pipeline.

The Risk Assessment Facilitator for the project will be Dr Hassan Chaka of Sabatta National Animal health Diagnostic and Investigation Centre (NAHDIC) and the Country Champion is Dr Amsalu,Demisse the Deputy Chief Plant Diseases and Animal Health Department.

3. Presentation of the objectives of the workshop Dr Hassen Chaka, NAHDIC

(see Annex 2)

4. Presentation of the Risk Assessment Activity Solenne Costard, RVC

(see Annex 3)

5. Introduction to Risk Analysis Solenne Costard, RVC

(see Annex 4)

The presentation stressed that the RAs are Ethiopian decisions and inputs are Ethiopian. The project will focus on capacity building so that the RAs can be updated in Ethiopia and the technique can be used for other livestock diseases. IFPRI, ILRI and RCV will only facilitate the process and provide technical support.

6. Background information: HPAI and poultry production in Ethiopia. Serge Nzietchueng (ILRI) Hassen Chaka NAHDIC **(Annex 5)**

7. Definition of risk question Solenne Costard, RCV

The participants were asked to determine the risk questions that would underpin the risk pathway and risk assessment for Ethiopia.

Previous Risk Assessment on HPAI carried out for Ethiopia

1. Qualitative RA on risk of introduction, release and exposure of HPAI due to wild birds. Carried out by Goutard Flavie and al (CIRAD-EMVT).

2. Generic qualitative RA on the risk of introduction, release and exposure of HPAI via formal and informal importation of poultry. Carried out by Olive Marie-Marie and al (CIRAD-EMVT).

3. Quantitative RA on the risk of importation, release and exposure of HPAI via DOC imports. Carried out by Soares Magalhaes Ricardo and al (RVC and CIRAD-EMVT).

The meeting concluded that these RAs should be used to inform the project and that the work should not be repeated but updated or completed where necessary. The RA on introduction via DOCs should be updated as the legislation has changed (now DOC imports are from countries HPAI free (according to OIE status). However this is a quantitative RA and the parameterization and risk estimation would need to be redone if updated in the context of the DfID HPAI project.

Other studies included:

- Risk of transmission of avian diseases from multiplication centres to backyard poultry farms (report not yet available, CIRAD-EMVT)
- Poultry market chains in prep (Marie-Marie Olive, CIRAD-EMVT): potential for spread.
- Social Network Analysis on transmission between backyard farms. (Serge Nzietchueng, ILRI)

The list of risk questions is found in Table 1.

Table 1 List of potential Risk Questions

Risk Question	**focus**	**Data needs**	**analysis**
Transmission of HPAI H5N1 virus from large commercial farms to small scale producers	Spread and establishment	Value chains, exchanges between farms and others[1]	Accepted as there is a link to value chains and info will have an impact on policy
Transmission of HPAI H5N1 virus from small scale farms to backyard farms	Spread and establishment	Value chains, exchanges between farms and others	Considered: There is a link to value chains and info will have an impact on policy
Transmission of HPAI H5N1 virus from small scale to backyard	Spread and establishment	Value chains, exchanges between farms and others	considered
Transmission of HPAI H5N1 virus from large commercial farms to backyard farms	Spread and establishment	Value chains, exchanges between farms and others	Considered
Introduction of HPAI H5N1 virus via legal and illegal trade of wild birds transiting Ethiopia (Addis airport is a transit point)	introduction	Flows, origins, species, frequency, time in country	Accepted. It has no link to value chain and a small impact on policy but covers information on introduction at borders
Risk of HPAI H5N1 virus introduction via legal and illegal trade			Covered in a previous RA
Risk of introduction of HPAI H5N1 virus via fomites associated with trade at borders.	introduction	Value chain	considered
Transmission of HPAI from the market to backyard poultry			Will be covered in a study by Marie Marie O. (CIRAD-EMVT)

[1] A mapping of poultry value chains in Ethiopia is available, study done by Debre Zeit Agriculture research, FAO and ILRI

Risk of introduction of HPAI H5N1 virus via legal and illegal imported HPAI vaccines			This is not relevant as no live vaccines are imported

There was lively discussion on the selection of the risk questions, especially as the risk of introduction via the trade in wild birds was a new concept to most of the participants. It was decided to investigate two risk questions. The importance of some informal discussion over coffee in Amharic, that was not facilitated, was noted as it gave people time to digest the information.

The risk pathways and tables of data needs for each Risk Question were defined in a participatory manner. The risk pathways are found in Figures 1, 2 and 3. The data needs and potential data sources are found in Tables 2, 3 and 4. It was decided that a small Semi-structured Interview would be carried out at the commercial farm level (3-10 farms) to answer questions raised in the risk pathways.

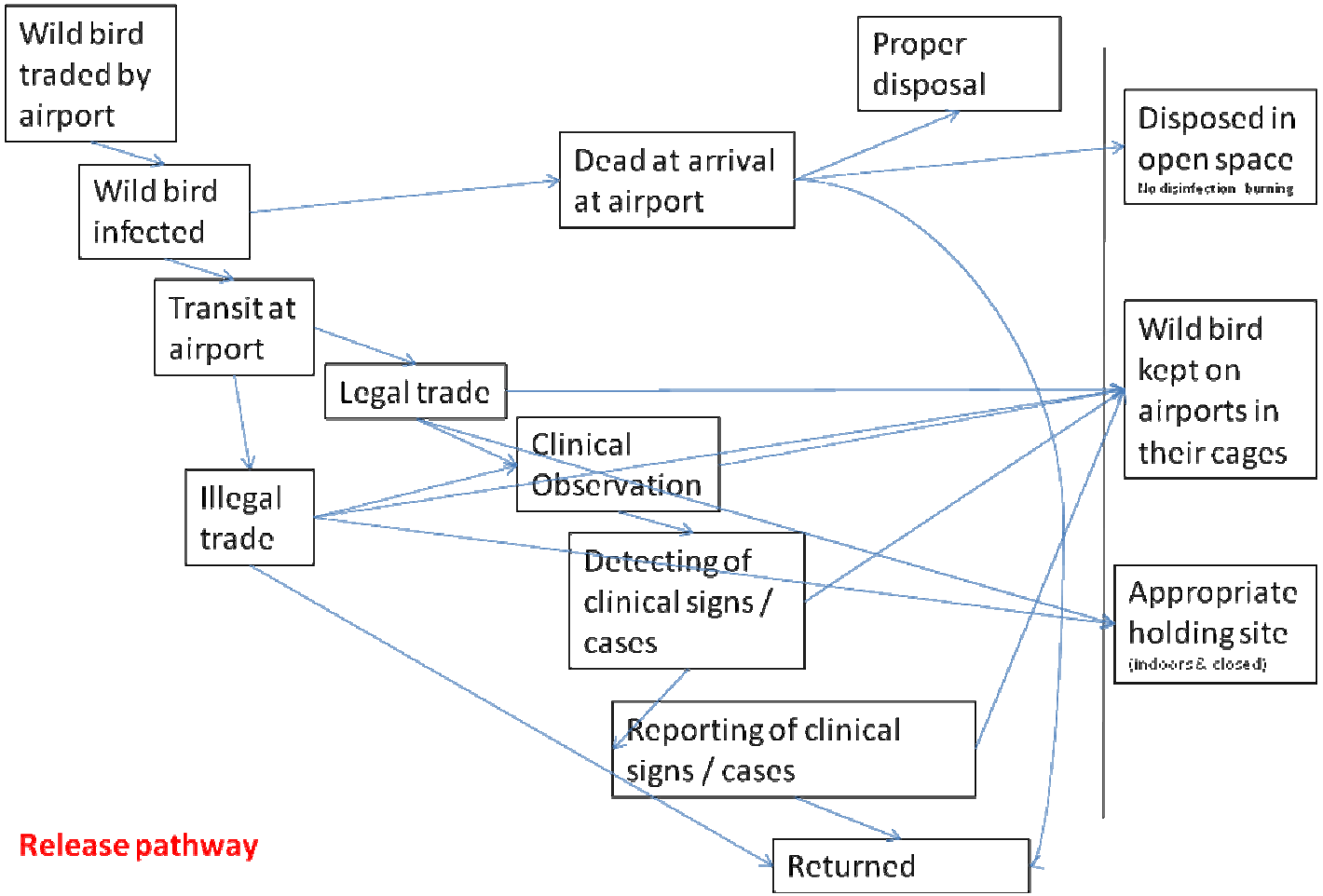

Figure 1. Release pathway for the introduction of HPAI via legal and illegal trade of wild birds transiting in Ethiopia

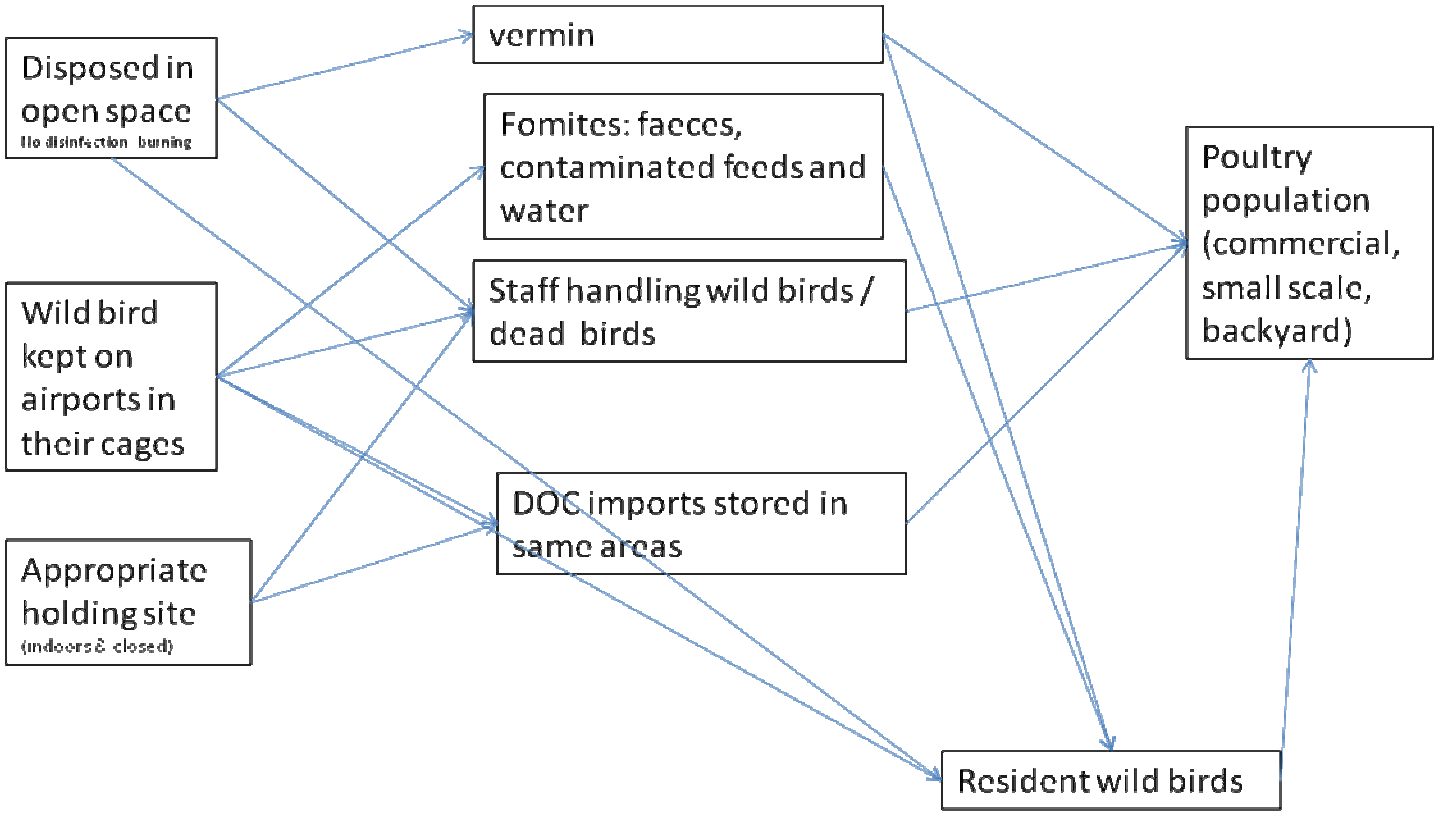

Figure 2: Exposure pathway for the introduction of HPAI via legal and illegal trade of wild birds transiting in Ethiopia

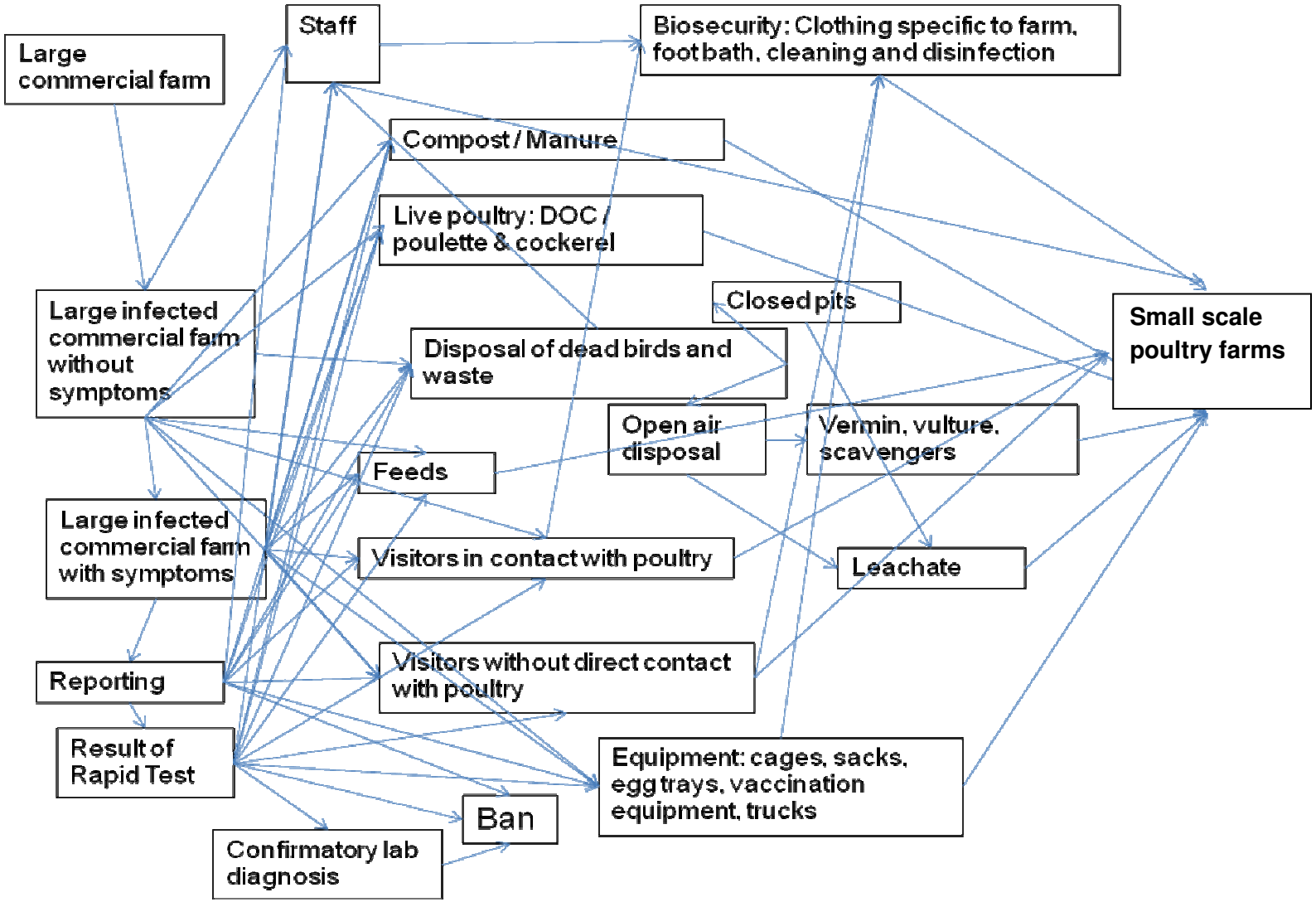

Figure 3: Transmission pathway of HPAI from large commercial poultry farms to small scale poultry farms in Ethiopia

Table 2 Data Needs and Data sources for the release pathway of the introduction of HPAI via legal and illegal trade of wild birds transiting in Ethiopia

Step	**Data Needed**	**Sources**
Wild birds traded by airport	Volume / Frequency	Airport
Wild bird infected	Origin and status of country, duration of flight Species and susceptibility + potential to carry H5N1	Airport Wildlife Department, OIE report, Literature
Dead at arrival at airport	Proportion of birds dying during transport / Statistics from airport	Airport Quarantine section
Returned Proper disposal Disposed in open space	Volume or Proportion returned or disposed of Disposal practices	Airport Quarantine section
Transit at airport	Volume / Proportion transiting	Airport / Staff
Legal Illegal	Proportion or Volume illegal & legal trade	Quarantine section (health certificate) Airport customs (transport certificate) wildlife department
Holding site	Holding practices / facilities	Airport / Staff
Clinical observation	Number / Frequency / Proportion inspected Time to examination / Clinical examination Susceptibility / Potential as carrier Incubation period	Quarantine section Literature / NAHDIC / wildlife
Behaviour in case of detection	Number / Proportion of reporting	Quarantine section / airport / staff
Behaviour in case of reporting : return or not	Number / Proportion returned Place held before returning (isolation)	Airport / customs / Quarantine section

Table 3 Data Needs and Data sources for the exposure pathway of the introduction of HPAI via legal and illegal trade of wild birds transiting in Ethiopia

Step	**Data Needed**	**Sources**
Disposed in open space	Duration, Access from outside	Airport / Quarantine section / staff / wildlife Department
Wild birds kept on airport in their cages	Duration / Number	Airport / staff / wildlife Department
Wild birds in appropriate holding site	Duration / Number	Airport / staff / wildlife Department
Vermin	Species / Number Buildings and treatments against rodents/vermin Possibility of contact with wild birds or poultry (close to airport)	Airport / staff
Fomites (faeces, contaminated feeds and water)	Type of feeds and water systems / proportions Type of cage / volume of faeces Frequency of cleaning / disinfection Survival of virus in feeds / water Survival of virus in faeces	Wildlife Department Airport / staff qquarantine section NAHDIC Literature
Staff handling wild / dead birds	Number and frequency of contact Type of contact (dead or live birds) PPE/ Cleaning and disinfection Survival of virus in contaminated material Proportion of staff keeping poultry	Airport / Staff Quarantine section Wildlife Department Literature / NAHDIC
DOC imports stored in same area	Place of storage / Type of contact Volume, Number / Duration Susceptibility / Incubation period	Airport / staff/ 40n section / wildlife Department Literature
Resident wild birds	Species (incl. vultures)	Wildlife Department.

	Susceptibility / potential as carrier	NAHDIC
	Type / frequency of contact with live birds in cages / dead birds	Literature
	Probability of contact between resident wild bird and poultry population	Airport / Staff
		Vets / pharmacies / MoARD

Table 4 Data Needs and Data sources for the transmission pathway of HPAI from large commercial poultry farms to small scale poultry farms in Ethiopia

Steps	**Data needed**	**Data sources**
Large commercial farm	Level and variation of biosecurity	MoARD, FAO, literature
Permanent &temporary staff	Number of staff and proportion having poultry	Farm/ staff
	Frequency of movement of staff between LCF & SCF	
Biosecurity: clothing specific to farm, foot bath, cleaning and disinfections	Implementation and monitoring of biosecurity procedure	Farms , MoARD, FAO, , SPS-LMM
Visitors in contact with poultry	Number and type of visitors	Farms
	Purpose of visit	
	frequency of movement between LCF & SCF	
Disposal of dead birds and waste	Duration	Farms, private vet clinic
	Number	
Proper disposal pits	Biosecurity level (?)	Farms
Open air disposal	Duration	Farms, private vet clinic
	Number	
vulture, scavenger, Vermin	Species and susceptible	Farms
	Treatments against vermin	
Leachate	????????????????	Literature??

Live poultry: DOC, pullet & cockerel	Number , volume and frequency of DOC, pullet, cockerel distributed to SCF	Farm
Visitors without direct contact with poultry	Number and type of visitors Purpose of visit frequency of movement between LCF & SCF	Farm
Equipment: cages, sacks, egg trays, vaccination equipment, truck	List of equipment Frequency for exchange Biosecurity level	Farm
Compost/manure	Practice of selling number of SCL buying, volume and frequency selling Survival of virus	Farm, MoARD, literature review
Ban	Compliance: what proportion will apply ban while waiting for test results	Ministry of Agriculture (exp on banning)
Rapid test / Confirmatory	Duration : 1d – 3d	NAHDIC
Reporting of clinical cases	Proportion of farm reporting to NAHDIC	NAHDIC: past reports of clinical disease
Feeds	number of SCL, volume and frequency selling	Farm

The workshop closed at 13:00 on 26th September

Informal discussion covered what went well and what needed improvement.

Analysis of the workshop

What went well ?
Good participation and sufficient brainstorming
Confidence in defining risk question

Willingness to update previous RAs and information
Understanding of OIE framework on RA
Productive to the end
Good range of stakeholders
The participatory methodology was very enjoyable and people enjoyed having their ideas considered and included in the risk pathway

What needed improvement?
Needed an IFPRI person in the country to smooth the planning and ensure that the invitations went out on time and to follow up on key people
Despite confirmations, the workshop still missed the input of some key people
Have a coffee break in the middle of the risk question and the risk pathways to allow people to reflect
Don't break if no coffee; people disappear. Ensure that a time is given to come back.
It was difficult having the meeting over Meskel as this affected attendance
Before discussing the risk question, show the overall information flow and how the risk question and risk pathway will flow into the overall synthesis